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The Kansas City Nurseries

GEORGE H. JOHNSTON, *Proprietor*

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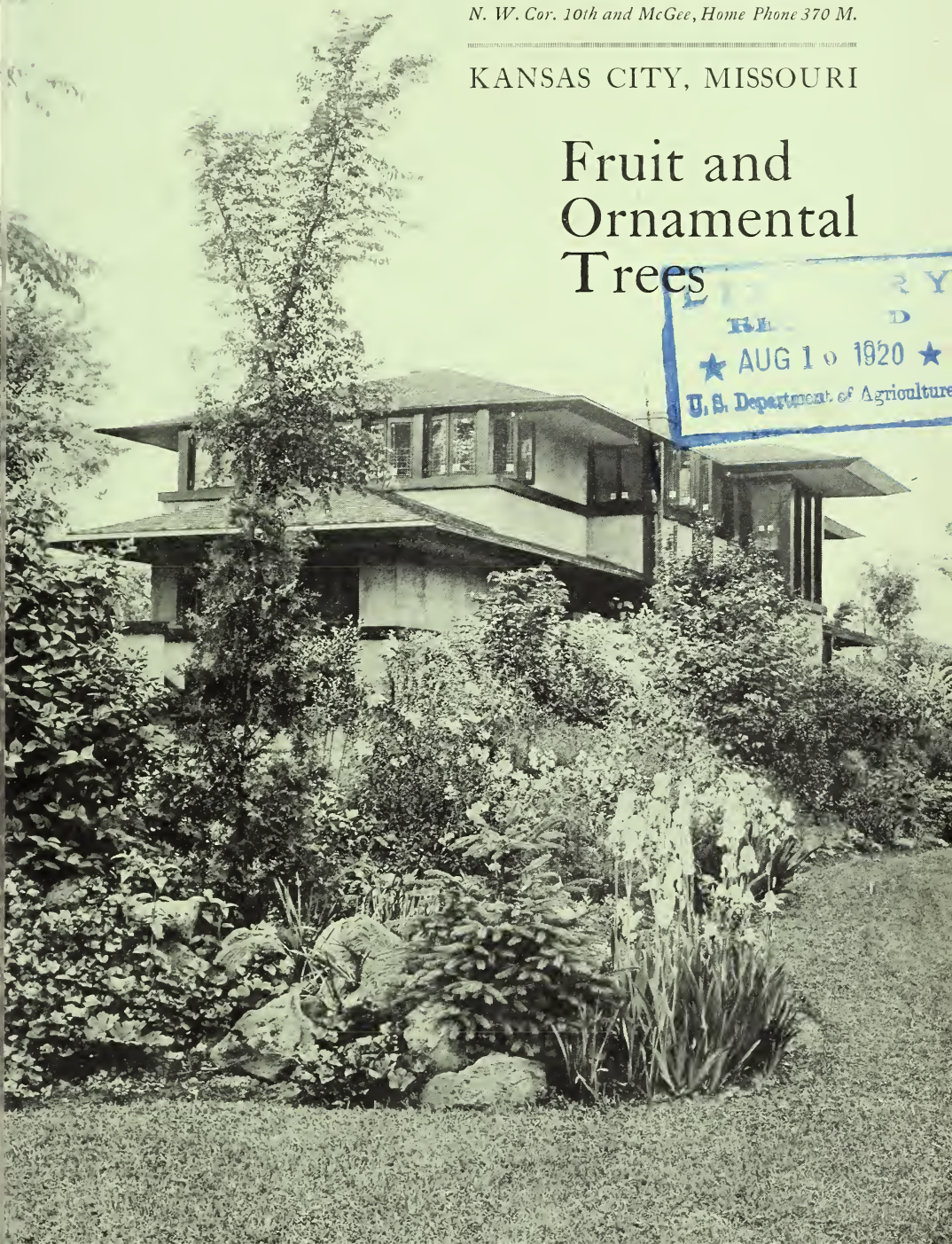
KANSAS CITY, MISSOURI

Fruit and Ornamental Trees



AUG 10 1920
U. S. Department of Agriculture

Introductory

THE SUCCESS of the Kansas City Nurseries is based upon their honest and liberal transactions with their customers. In the first place, we know our stock and can meet the demand of the purchaser. This in a well-managed and regulated institution always means success. Therefore, in presenting this descriptive catalogue we solicit your continued patronage, believing it to be to your interest as well as to ours, for the following reasons:

First. We have been in the nursery business for many years, thereby attaining a full and complete knowledge of what varieties are giving the best satisfaction in this locality; also of the best mode of propagating and growing stock, and of handling and caring for it when transplanting.

Second. It has been acknowledged by all who have visited our nurseries that we have the best assortment of beautiful and well-developed Evergreens, Flowering Shrubs, etc., that can be found in any nursery in the West. In this we have accomplished our desire to be able to supply the Western trade with Western-grown stock.

Third. We are not making a specialty of growing a few sorts, such as apples, peaches and cherries, but have a general nursery, thereby enabling the purchaser to select from a complete assortment of fruit, deciduous and evergreen trees, flowering shrubs, vines, roses, bulbs, etc., that are of superior quality and at less cost than the same stock can be secured from Eastern nurseries.

Fourth. Our location is in the center of a great fruit-producing country. New sorts are continually being tested, and either placed on the list as being worthy or discarded, thus enabling us to obtain the very best approved varieties.

Fifth. Kansas City is the acknowledged great railroad center of the West, making our railroad facilities for quick transportation for perishable goods one of the best. We are enabled to ship direct to all points without the risk of delay in transferring stock from one railroad to another.

Sixth. The advantages of our nursery-grown shade or street trees over those obtained from the forest. The transplanting of trees into nursery rows, together with the thorough cultivation they receive, causes them to form an abundance of root, making them more vigorous and healthy, and when transplanted by purchaser, they will make a strong growth from the start, thus enabling them to resist the hot rays of the Summer sun.

GEORGE H. JOHNSTON, Prop.

418 Reliance Building, N. W. Corner 10th and McGee

Home Phone 370 Main, KANSAS CITY, MISSOURI

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Please Read Before You Order

In preparing this catalogue it is our desire and aim to make the descriptions and time of ripening, etc., as accurate and intelligent as possible, and, in so doing, lend assistance to those desiring to make a selection, so as to obtain varieties suited to their locality, and also that a succession of ripening from the earliest to the latest may be obtained.

Advice to Correspondents

Send in Your Orders as early as possible, so that there may be no delay at the time of shipment. All orders will receive prompt attention.

Use the Order Sheet. All orders should be written out on the order sheet and not mixed up in the body of the letter. This will save much trouble, and, at the same time, prevent mistakes.

In Ordering Fruit Trees, state whether standards or dwarfs are wanted; also the age, size and number desired.

Substitution. When particular varieties are ordered, state if substitution is allowed and to what extent, in case the order cannot be filled as ordered, as sometimes is the case in all nurseries. When no instructions are given, we will use our best judgment so as to render the best satisfaction to the customer.

Shipping Directions. Give explicit directions for marking and shipping stock. In case no directions are given, we will ship the cheapest and most direct route by freight, unless it is deemed safest and best to ship by express. In all cases, the shipment will be at the risk of the purchaser, and if delay or loss occurs in transit, the forwarders alone must be held responsible.

Orders from Unknown Correspondents must be accompanied with a draft, postoffice or express money order for the amount. If neither can be obtained, enclose currency in registered letter.

Errors. Customers are requested to send notice at once of any error that may be made in filling their order, so that it may be rectified and explained.

Articles by Mail. Packages of small articles will be sent by mail, postpaid, for the convenience of those who can not be reached by railroad or express.

The Shipping Season. There can be no definite time specified for beginning to ship, either in the spring or fall. That is regulated by the opening of the spring—early or late—and by the ripening of the stock in the fall; as the season for planting is not regulated so much by any particular month or day, nor by the state of vegetation, but more particularly by the condition of the trees to be planted. It is therefore better that orders be sent in early so the stock can be shipped or delivered at the proper season in good condition.

Guarantee of Genuineness

While the greatest diligence and care to have all trees, etc., true to label, will be exercised, mistakes may occur, and, in such cases, upon proper proof, the trees, etc., will be replaced free of charge, or the amount refunded; but it is mutually understood and agreed to between the purchaser and ourselves that the guarantee of genuineness shall in no case make us liable for any sum greater than that originally paid for the trees, etc., that proved untrue, nor for damage.

Remarks

Great developments have been and are still being made in the creation of new fruits; and, while many of the new varieties have not maintained their first representations, some have proved even more valuable than was at first anticipated and must be considered as very valuable acquisitions. This is more especially so among the plums and small fruits. But, in examining a catalogue, one thing cannot help but be observed; that the old leading sorts still maintain their place at the very head of the list and, therefore, in the revision of this catalogue, care has been taken to leave out such varieties as are not considered valuable, and only such varieties are given place as are now in general cultivation (some of which will succeed well only in certain locations), so that by a judicious selection from the list, a model orchard may be obtained.

Hints on Transplanting

The natural place for the roots of trees and plants is in the ground, and as soon as they are exposed to the atmosphere and become too dry, they begin to lose their vitality; therefore, let it be kept in mind that too much care cannot be taken to protect their life and vitality while out of the ground, as a failure in this is often the cause of a feeble growth when transplanted. Poor growth is also caused by not having the ground in proper condition at time of transplanting and a lack of after-cultivation.

Soil—Its Preparation, Exposure, etc. Any soil that will grow good crops of corn and small grain will answer for fruit trees, etc. Eastern and northern exposures are usually stirring the ground 20 inches or more deep; the deeper the better. This is not only for considered the best, but perhaps more depends on the quality of the soil and its preparation and after-cultivation than on the exposure. If the ground is naturally wet, spouty and cold, artificial draining is necessary before planting. Any ground should be well prepared by twice plowing, using the subsoil plow after the common one at the second plowing, and trees, but small fruits as well. On good, rich soil, manuring will be unnecessary, but on thin or poor soil, fertilizers, such as decomposed manure or compost, should be applied freely. Never grow small grain in the orchard, but always some crop that will require thorough cultivation, and the rows of trees should be kept cultivated at least until the latter part of August.

Transplanting. When the trees are received, open the bundles and heel in, so that mellow earth will come in contact with all the roots. It may be necessary to apply water to moisten the soil. Before planting, the ends of all bruised and broken roots must be cut, sloping from the under side. If the soil is properly prepared, the holes need not be dug much larger than to receive the roots in their original position. In planting in sod, in yard or lawn, the hole should be dug 4 to 6 feet in diameter and a little deeper than is necessary to set the tree, always using good mellow soil in filling in, pressing the ground well about the roots, and in such a manner as to leave them in their natural position as much as possible. Water freely used in planting helps to settle the earth about the roots. Mulching, as soon as the tree is planted 3 or 4 inches thick, and 4 to 6 feet in diameter, should be applied, but the earth should be well pressed about the tree before applying the mulching.

Depth to Plant. About the only correct guide that can be given in regard to the depth to be planted is that when the ground is well pressed about the tree or plant it will be as deep or a little deeeper than it stood in the nursery; and in this it is well to bear in mind that the roots of some trees, such as the standard pear, strike their roots deep, and require a deep hole, even to plant them as deep as they were in the nursery. Dwarf trees should be planted so that all the stock on which they are worked will be well under ground.

Pruning. Cut back one-third to one-half of last season's growth, and one-year-old peach to almost a bare stock, and headed back to the desired height, for forming the top; the buds on the body of the peach tree will make a better growth and form a better top than if the side branches are left on. It is not advisable to do this close pruning until just before the buds start in the spring. Remove the labels before the trees begin to grow.

Wintering Trees When Procured in the Fall

Procuring trees in the autumn for early spring planting is recommended when the purchaser is not prepared to plant in the fall or prefers spring setting, or where the winters are too severe to set out young trees or plants in the fall; the greatest advantages derived in doing so are that when the roots have been cut or pruned, it will be found upon taking them up in the spring, that a callous has been formed ready for the producing of new rootlets and the trees being planted without much exposure, as soon as the frost is out of the ground, will become thoroughly established the first season, and should make twice the growth of late-planted trees; and the labor of planting is then done before the rush of the spring work sets in. To insure success, select a dry spot of ground where water will not stand during winter, and no grass or litter that will invite mice.

Dig a trench from 3 to 4 feet wide, according to the amount of trees to be heeled in, and deep enough to admit one layer of roots and sloping enough to let the trees lie at an angle of about 30 degrees, throwing the earth on the back part of the trenches so as to make a more perfect slope on which to lay down the trees. Put in one layer of trees, placing the roots as close together as can conveniently be done, cover with well-pulverized soil, well up on the bodies and as carefully worked in about the roots as if they were being planted; then add another layer of trees, overlapping the first, and continue as at first until all are heeled in, throwing the ground well up around the trench, and when the winters are very severe it is advisable to cover the trees entirely up with earth. Evergreen boughs, coarse straw, or corn fodder can be placed over the tops, but not thick enough to admit a harbor for mice. The roots should be pruned before laying them down in the fall.

Treatment of Trees, Etc., That Have Been Frozen in the Packages or Received During Frosty Weather

Put them unopened in a cellar or some other cool, protected place, free from frost, or cover them up heavily or entirely with earth until they are fully thawed out, when they can be unpacked and planted or placed in trenches until convenient to plant. Treated in this way they will not be injured by the freezing.

Suitable Distance for Planting

	Feet
Apples, Standard	25 to 40
Apples, Dwarf	6 to 8
Pears, Standard	18 to 20
Pears, Dwarf	10 to 12
Peaches	16 to 18
Nectarines and Apricots	16 to 18
Cherries, Sweet	18 to 20
Cherries, Sour	16 to 18
Plums	18 to 20
Quinces	8 to 10

	Feet
Grapes	6 by 8
Currants	3 by 4
Gooseberries	3 by 5
Raspberries, Red	2½ by 6
Raspberries, Black	2½ by 7
Blackberries	3 by 8
Strawberries, in rows	1 by 3½
Strawberries, in beds	1½ by 1½
Asparagus, in beds	1 by 1½
Asparagus, in field	1 by 3

Number of Trees and Plants on an Acre at Various Distances

1 x 1 ft.	43,560
2 x 1 ft.	21,780
2 x 2 ft.	10,890
3 x 1 ft.	14,520
3 x 2 ft.	7,260
3 x 3 ft.	4,840
4 x 1 ft.	10,890
4 x 2 ft.	5,445
4 x 3 ft.	3,630
4 x 4 ft.	2,722
5 x 2 ft.	4,356
5 x 3 ft.	2,904
5 x 4 ft.	2,178

5 x 5 ft.	1,742
6 x 6 ft.	1,210
8 x 8 ft.	680
10 x 10 ft.	435
12 x 12 ft.	302
15 x 15 ft.	193
16 x 16 ft.	170
18 x 18 ft.	134
20 x 20 ft.	108
25 x 25 ft.	69
30 x 30 ft.	48
33 x 20 ft.	66

The number of plants required for an acre, at any given distance apart, may be ascertained by dividing the number of square feet in an acre (43,560), by the number of square feet given to each plant, which is obtained by multiplying the distance between the rows by the distance between the plants. Thus, strawberries planted 3 feet by 1 foot gives each plant 3 square feet, or 14,520 plants to the acre.

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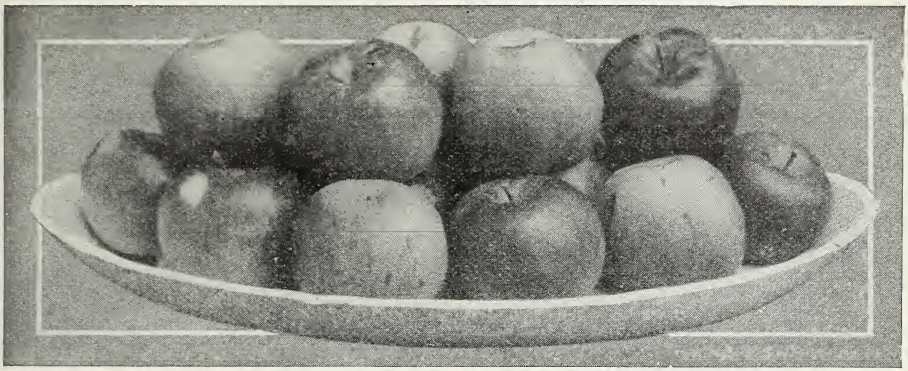


Fruit Department

The habit of growth is indicated by "Mod.," "Free," "Vig.," "Slow," at end of description, meaning moderate, free, vigorous or slow growers.

The season of ripening after habit of growth, embraces that portion of country between parallels 39 and 40. This takes in Dayton, O., Indianapolis, Ind.; Springfield, Ill.; Kansas City, Mo.; and Topeka, Kan. The season of ripening will be earlier or later in proceeding South or North.

Directions for spraying will be found in the last pages of this catalogue.

Apples

The past few years have witnessed the shipment abroad of thousands of barrels of American apples. They are the first fruit both in importance and general culture. Its period, unlike that of other fruits, extends nearly or quite through the year. By planting judicious selections of summer, fall and winter sorts, a constant succession can be had of this indispensable fruit.

Summer Apples

Astrachan Red. Large, roundish, beautifully marbled with crimson, covered with a heavy bloom; a good bearer. Free. July.

Benoni. Medium, roundish; pale yellow, shaded with crimson; juicy, tender and sub-acid. August.

Carolina Red June (Red June). Medium; red; the flesh is white, tender, juicy and sub-acid. The tree is an abundant bearer. Last of June.

Chenango Strawberry (Sherwood's Favorite). Medium, oblong and indistinctly ribbed; skin whitish, splashed and mottled light and dark crimson; the flesh is white, tender and juicy, with a mild, sub-acid flavor. Valued for the table. Its handsome appearance commands a quick sale in the markets. Vigorous and a good bearer. Aug. and Sept.

Cooper's Early White. Very large, roundish; pale yellow, with faint blush; flesh white, crisp and sprightly. Originated in the West. Vig. First of Aug.

Duchess of Oldenburg. A Russian variety of medium to large size, of good shape; skin yellow, streaked with red, somewhat blushed, and sometimes with a faint blue bloom; flesh juicy, and good, with a rich sub-acid flavor. One of the best for culinary use, being well adapted for cooking and drying. Productive. Slow. Aug.

Early Harvest. Medium to large, roundish; bright straw-color; flesh white, tender, juicy, crisp, with rich sub-acid flavor. The tree is moderately vigorous and productive. An excellent variety for both orchard and garden. First of July.

Sweet June (High Top Sweet). Medium, round; pale greenish yellow; very sweet, pleasant, rich and tender. Mod. June 25 to July 15.

Sweet Bough. Large; pale greenish yellow; flesh tender and sweet; moderate grower and good bearer. July.

Grimes Golden.

SUMMER APPLES—Continued

Yellow Transparent (Russian Transparent, Grand Sultan). A Russian variety, imported in 1870, through the Agricultural Department. Pronounced by some who have seen it as the best early apple ever produced. Ripens with Early Harvest and the fruits will keep fully ten days after ripening, making it valuable for early shipping. Fruit of medium size and good quality; skin clear white, changing to beautiful yellow when ripe. Slow.

Autumn Apples

Bailey's Sweet. Large, round; mottled and striped deep red; flesh yellow and tender, with a mild, rich, sweet flavor. Slow. Sept.

Lowell (Orange). Large, roundish, slightly conical, green, becoming rich yellow, with an oily surface; the flesh is yellowish white, sub-acid and excellent. A good bearer. Free. Sept.

Maiden's Blush. Rather large, oblate, smooth and regular; pale yellow, with beautiful red cheek; flesh white, tender, sprightly, with a pleasant sub-acid flavor. An abundant bearer. Free. Aug. and Sept.

Munson's Sweet. Large; pale yellow, with red cheek; tender, rich and good. Fine bearer. Vig. Sept.

Rambo. Medium; yellowish, streaked with dull red and somewhat dotted; mild, tender and good. The tree is productive and vigorous. Sept. to Nov.

Wealthy. A native of Minnesota, and one of their hardy sorts. An apple of fine appearance and good quality; in size it equals the Baldwin, and is better for dessert. One of the most productive varieties, sometimes almost killing itself with its early and excessive bearing. Valuable for market.

Winter Apples

Ben Davis (New York Pippin). Medium to large, roundish; skin yellowish, splashed and striped and almost covered with red; the flesh is white, tender, moderately juicy, sub-acid. The tree is very hardy, a free grower, and comes into bearing early. A valuable feature is its blooming late in the spring, thereby escaping late frosts. Highly esteemed in the West. Dec. to March.

Grimes' Golden (Grimes' Golden Pippin). Medium to large in size, and of the highest quality. A bright yellow apple, which grows and bears well in every section of the country. Hardy, vigorous and productive. Nov. to Dec.

Gano. Originated in Missouri. Large, oblong, tapering to the eye; the fruit is bright red on yellow ground, with no stripes, flesh pale yellow, fine-grained, tender, pleasant, mild sub-acid. The tree is healthy, vigorous, hardy and an early and annual bearer. Jan. to April.

Huntsman's Favorite. This variety also originated in Missouri. Very large; golden yellow, with bright red cheek; nearly sweet, of fine flavor and very aromatic. Tree healthy and moderately productive. Vig. Nov. to Jan.

Ingram. A seedling of Janet. Medium, roundish, inclined to conical, smooth; yellow ground, striped bright red; flesh greenish yellow, delicate, tender, juicy, sub-acid. A late keeper.

Jonathan. Medium, roundish; skin yellowish, nearly covered with dark or lively red;

Jonathan.

WINTER APPLES—Continued

fine-grained, very tender and finely flavored. Mod. Oct. to Dec.

Little Romanite (Gilpin Carthouse). Medium size, roundish, oblong; the skin is very smooth and handsome, streaked with deep red and yellow; flesh yellow, firm, rich, becoming tender in spring. Hardy and productive. Vig. Feb. to June.

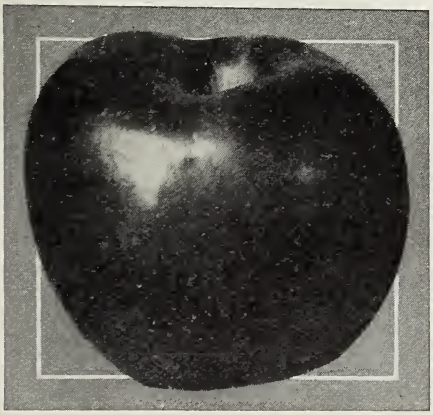
Mammoth Black Twig. Fruit large, often measuring 12 inches in circumference. Excels Winesap in nearly every important point, the color being even a darker red, the flesh firmer, flavor milder, but fully equal. The tree is a fine, upright, spreading grower, and bears large crops and holds fruit well. Vig. Nov. to April.

Minkler. Fruit medium, roundish, oblate, slightly conical; pale greenish yellow, striped and splashed with two shades of red; flesh yellowish, compact, moderately juicy, mild, pleasant, sub-acid. The tree is an irregular grower. Vig. Jan. to April.

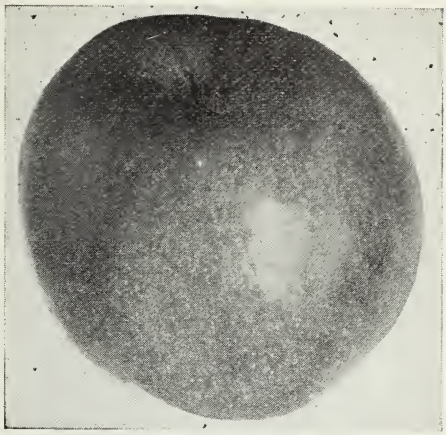
Missouri Pippin. Large, oblong; bright red, with numerous gray dots; very handsome and of fair quality. Early and immense bearer. A good orchard apple. Vig. Dec. to March.

Northwestern Greening. Of Wisconsin origin. The fruit is of good size; smooth, yellowish green; quality mild pleasant sub-acid, aromatic. Very good and an extra-long keeper. Tree hardy, vigorous, and an abundant, annual bearer. Jan. to June.

Rawle's Janet (Never Fail). Medium, roundish, ovate; greenish yellow, striped with red; crisp, rich and juicy. The tree is very vigorous and spreading, coming into bloom later than most varieties, thereby avoiding late frosts. Much cultivated in the South and Southwest. Mod. Jan. to May.



Stayman's Winesap.



York Imperial.

Roman Stem. Medium; whitish yellow, splashed with russet; has rich, pleasant, musky flavor; flesh tender, juicy. Fine dessert apple. Mod. Nov. and Dec.

Stayman's Winesap. Medium size, round, approaching conical; skin smooth, greenish yellow, splashed and striped with red and purple; flesh yellow, firm, tender, juicy, rich, mild, sub-acid and aromatic. An early bearer and very productive. Jan. to May.

Talman's Sweet. Medium; pale yellow; firm, rich and sweet. Valuable for baking. Vig. Oct. to Dec.

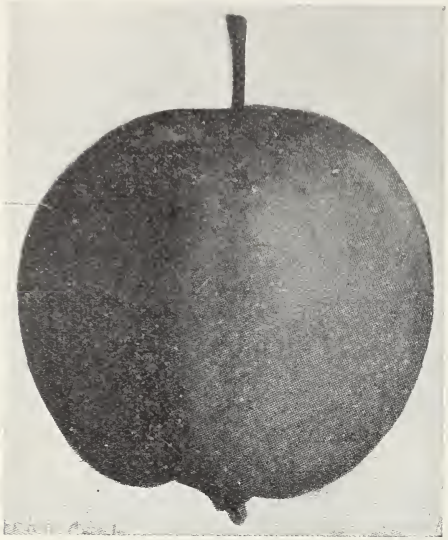
Willow Twig. Large, roundish; greenish yellow, striped with dull red; flesh firm, rather tough. Very popular in the South and West. Valuable on account of its late-keeping qualities. Mod. Jan. to May.

Winesap. Medium; dark red; sub-acid. Tree an abundant bearer. One of the finest cider apples grown, both on account of its overabundance of juice and its productiveness. Vig. Nov. to April.

Wolf River. Very large and handsome; flesh whitish, breaking, pleasant, sub-acid. An apple peculiarly adapted to the West on account of its hardiness. A good bearer. Nov. and Dec.

Winter Banana. Tree is hardy and will succeed in very cold climates; the fruit has a richness of flavor that cannot be described. It surpasses in aromatic taste the choicest pear, plum, apricot, peach, cherry or any other fruit grown. Flavor very rich, spicy and aromatic. Flesh golden yellow, fine grained, firm and juicy. Tree a very strong grower.

York Imperial. Medium, oblate; white, shaded with crimson; flesh firm, crisp, juicy and sub-acid. A splendid bearer and keeper and equally valuable for the table or for cooking. Mod. Nov. to April.



Transcendant Crab.

Crab Apples

Within the past few years much attention has been given to the improvement of this class of fruit. A few years ago it was considered fit only for cider, preserves and jelly, but there are varieties now that command a good price on the market for dessert purposes; especially is this the case with the Whitney. They are also very ornamental when in bloom. The following are the most valuable varieties:

General Grant. Fruit large; red to very dark red; flesh white, tender, mild, sub-acid. Fine for dessert. Free. Oct.

Hyslop. Almost as large as Early Strawberry apple; deep crimson; flesh inclined to yellow, sub-acid. Popular on account of its large size, beauty and hardiness. Vig. Sept. and Oct.

Large Red Siberian. About an inch in diameter and grows in clusters; yellow, lively scarlet cheek. Tree large with coarse foliage; bears young. Vig. Aug. and Sept.

Transcendent. The fruit is from 1½ to 2 inches in diameter; skin yellow, striped with red; the tree is perfectly hardy and a young and abundant bearer. Vig. Aug. and Sept.

Whitney's No. 20. One of the largest; skin smooth, glossy, green, striped and splashed with carmine; flesh firm, juicy and rich. Makes a fine white cider. Tree a vigorous handsome grower, with dark green glossy foliage. Aug. and Sept.

Pears

The growing of this noble fruit is rapidly extending as its value is appreciated, and the demand for it, both green and dried, is increasing every year. It far excels the apple in its melting, juicy texture, rich, refined flavor and the range of varieties is such that by a careful selection, the ripening season, beginning in July, can be continued in succession into winter. It is a mistaken idea that standard pears are a long time coming into bearing; many varieties begin to bear in from four to six years after transplanting, and some of the varieties, such as Kieffer, will produce fruit as soon as the dwarf pears, which is usually two to three years after transplanting. The pear when once in bearing seldom fails to produce a crop of fruit annually.

Gathering Pears. In order to retain the juice and best flavor, summer pears should be gathered at least ten days before they are ripe, and autumn pears at least two weeks; winter varieties, as soon as the leaves begin to drop.

Thinning the Fruit. When the trees are heavily laden, the fruit should be thinned when about one-third grown, or the fruit will be poor and the tree injured.

The letters "D" and "S" following the variety indicate favorable growth either as "Dwarfs" or "Standards" or both. Those designated as moderate growers are usually smaller trees.

Summer Pears

Bartlett. D. and S. Large, often with a beautiful blush to the sun; buttery, juicy and high-flavored. The beauty, size and excellence of the fruit and productiveness of the tree leave little to be desired and make it very popular. Vig. Aug.

Clapp's Favorite. D. and S. A large pear, resembling the Bartlett. Skin yellowish green, changing to yellow when ripe, marbled with dull red in the sun, and covered with small russet dots; vinous, melting and rich. Tree hardy and very productive. Vig. July.

SUMMER PEARS—Continued

Wilder Early. D. and S. Medium; greenish yellow, with a brownish red cheek and numerous dots; flesh white, fine grained, melting, excellent. One of the best keeping early pears. Ripens about three weeks earlier than Bartlett.

Autumn Pears

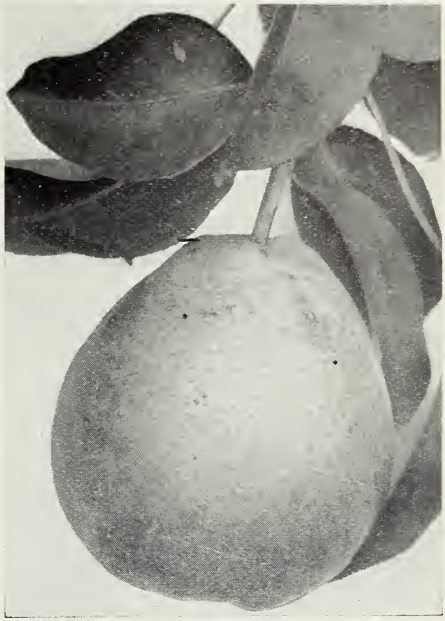
Beurre d'Anjou. D. and S. A large, fine pear. Greenish, sprinkled with russet, sometimes shaded with dull crimson; flesh white, buttery, melting, with a high, rich, vinous flavor. The tree is very productive and succeeds well on quince. One of the very best autumn pears. Vig. Sept. to Dec.

Duchesse d'Angouleme. D. Very large; dull greenish yellow, streaked and spotted with russet; flesh white, buttery and very juicy, with a rich and excellent flavor. Always fine on the quince, to which it seems well adapted. A general favorite on account of its large fruit and fine appearance. Vig. Sept. and Oct.

Flemish Beauty. D. and S. Large; red-cheeked; juicy, melting, rich and fine. A beautiful variety. A good bearer and hardy everywhere. Vig. Aug. and Sept.

Garber's Hybrid. S. A kin to and very much resembles the Kieffer, but is larger, of better quality, and ripens two to three weeks earlier. Yellow as an orange; juicy and rich. The tree is very productive and bears three years after transplanting. Esteemed for market. Sept.

Seckel.



Kieffer.

Kieffer's Hybrid. S. Raised from the seed of the Chinese Sand Pear, accidentally crossed with Bartlett, or near it. Of all pears grown for commercial purposes it is the leader. The fruit is of good quality, wonderfully showy, never rots at the core, and is valuable for the table or market. The tree has large, dark green glossy leaves, which make it very ornamental, is an early and prolific bearer, and is as nearly blight-proof as it is possible for any pear to be. Vig. Sept. and Oct.

Louise Bonne de Jersey. D. Rather large; greenish yellow, with a bright red cheek; juicy, buttery and melting. Very productive. Vig. Aug. and Sept.

Seckel. D. and S. Small, but of the highest flavor. Skin rich yellowish brown when ripe, with a dull brownish red cheek; flesh very fine-grained, sweet,, very juicy, melting and buttery. Vig. Aug. and Sept.

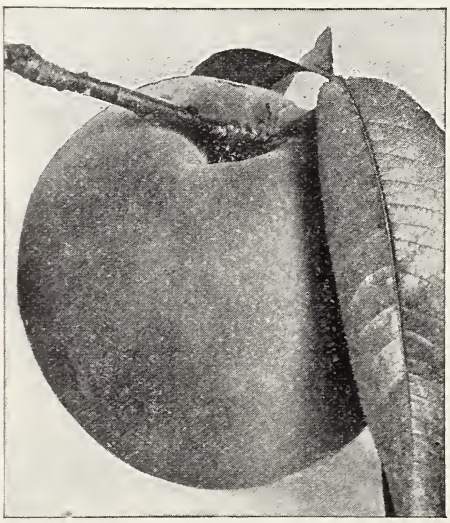
Worden-Seckel. D. and S. A seedling of the Seckel. Fruit medium size, borne in clusters; juicy, buttery, fine-grained, with a flavor and aroma equal to that of its parent, which it surpasses in size, beauty and keeping qualities. Oct.

Peaches

To secure healthy, vigorous and fruitful peach trees, it requires a well-drained, moderately rich soil, which must be kept clean and mellow—warm, sandy loam is probably the best. Peaches are all borne on wood of the previous season's growth, and this makes it absolutely necessary to prune the trees every year or two, so as to preserve a round, vigorous head. Remove all dead branches. The land should not be seeded to grass, but kept in constant cultivation.

The following have been selected as the best varieties. They furnish a succession for over three months, commencing about July 1st.

Alexander Early. Large, sometimes measuring 8 inches in circumference; nearly round; deep maroon, covered with rich tints of crimson; flesh white, juicy, vinous and firm, adhering slightly to the stone. Should remain on the tree until fully ripe. Last of June.



Crawford's Early.

Amsden. Medium; red, shaded and mottled with dark red, nearly covering the greenish white ground. If left to ripen on the tree, the flesh is white, with a delicious flavor. Middle to end of June.

Belle of Georgia. Fruit very large and most attractive in color and shape, with a light red cheek; flesh white, firm and delicious; in all ways the quality is fine. Trees grow quickly and shapely. Hardy; prolific. Free. First half of August.

Blood Cling. Large; dark claret, with veins; downy; flesh deep red, very juicy and of fine flavor. The tree is an irregular grower. Oct.

Blood Free. The fruit is medium to large; blood-red throughout; hardy and a good bearer.

Captain Ede. Said to be an improved Elberta, ripening 10 days earlier. Large, yellow, and of excellent quality.

Champion. A western peach, very large and of good quality. Skin creamy white, with red cheek; delicious, sweet, rich and juicy. Extremely hardy, having stood a temperature of 18 degrees below zero in the winter of 1887-8, and produced an abundant crop the following season, and again in 1890, producing a full crop when the peach crop was a universal failure. Freestone.

PEACHES—Continued

Chinese Cling. A favorite peach in the South. Large size, oblong; the skin is creamy white, with faint flashes of red. August.

Crawford's Early. A magnificent, large, yellow peach that is considered very valuable for market purposes. The skin is yellow, with fine red cheek; flesh yellow, juicy, sweet and excellent. Tree very productive. Free. Last of July.

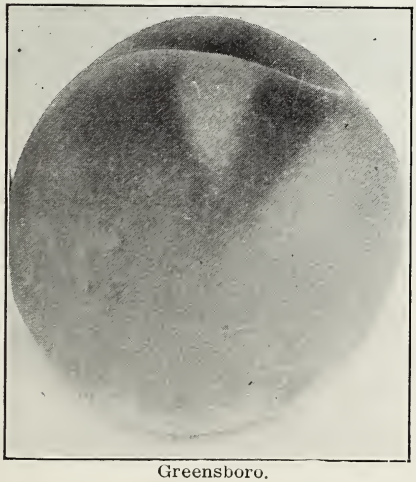
Crawford's Late. Fruit of the largest size; skin yellow, or greenish yellow, with dull red cheek; flesh yellow. Tree vigorous and productive. One of the finest late sorts. Free. Last of Aug. and Sept.

Chair's Choice. A large and handsome late yellow peach, with conspicuous red cheek; the flesh is rich in color, and very firm, juicy and melting. As a commercial peach it is without a rival. The tree is a great bearer. Ripens last of Sept.

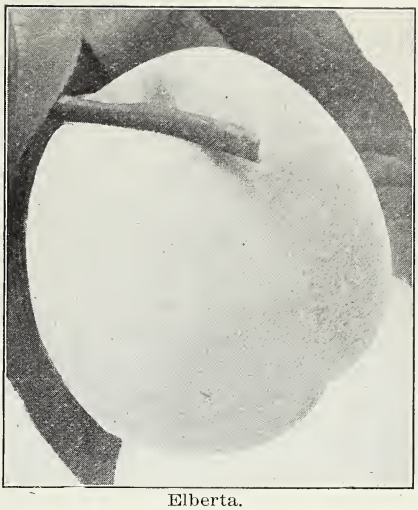
Crosby. Fruit medium size; bright orange yellow, streaked with carmine; flesh rich, luscious and sugary, An excellent market sort on account of its handsome appearance. Claimed to be the hardiest of all peaches. Freestone with an exceedingly small pit. Sept. 10.

Carman. Large, resembling the Elberta in shape. Creamy white or pale yellow, with deep blush; skin tough; its flesh is white, rich, tender and melting. One of the hardiest in bud. Fine for shipping and is considered one of the best for market. July 15.

Elberta. Introduced from Georgia. A cross between Crawford and Chinese Cling. Very large. It is the ideal market peach, and a royal fruit from its yellow and red skin to its red stone. The fruit is perfectly free from rot, and one of the most successful shipping varieties. Freestone. Aug. 20.



Greensboro.



Elberta.

Family Favorite. A seedling of Chinese Cling. Large; clear waxen complexion, with blush; flesh firm. The tree is very productive. Highly esteemed for shipping, canning or drying. Free. Last of July.

Fitzgerald. Originated on the north shore of Lake Ontario, and in that cold region the original tree bore five successive crops. Of very large size, magnificent quality and a perfect freestone. Skin bright yellow, suffused with red; flesh deep yellow. The tree bears the second year from planting. Aug. 10.

General Lee. An improved Chinese Cling. A very valuable variety. Aug. 20.

Globe. A Pennsylvania variety of great size and beauty. An improvement on Crawford's Late. Rich golden yellow, with red blush; flesh yellow and juicy. Free. Aug.

Greensboro. The largest and most beautiful of all early peaches. It is covered with light and dark crimson, shaded with yellow; flesh is white, juicy and good, and parts clean from the seed when fully ripe. First of July.

Henrietta (Levy). A magnificent cling of large size; the skin is deep yellow, covered with bright crimson; flesh yellow, firm, juicy and sweet. The tree is hardy, productive and a sure bearer. A first-class market sort. Sept. 25.

Heath Cling. Large, oblong; creamy white, slightly tinged with red in the sun; tender, juicy, melting, rich and luscious. A popular sort. Sept. 15.

Mammoth Cling. Resembles the above, but double the size. Valuable for preserves. Is superior in every way to Heath Cling. Sept. 20.

PEACHES—Continued

Mayflower. Earliest peach known; color red all over, beautiful appearance. Carries well to market. Blooms very late, crop never entirely cut off by late frosts, size medium, quality good. A very prolific bearer.

Mountain Rose. A superb early, white fleshed peach, which yearly adds to its reputation as the best of its season for home or market. Red; rich, juicy, excellent. Free. July.

Mamie Ross. Very large, oblong; color similar to Chinese Cling, of which it is no doubt a seedling, with more red cheek. It is one of the best early clingstones, ripening about last of July.

Oldmixon Cling. Large; pale yellow, with deep red cheek; juicy, rich and high-flavored. A favorite clingstone. Aug. 20.

Oldmixon Free. Similar to the above, with the exception that it is a freestone. Aug.

Picquet's Late. A large, late peach, which originated in Georgia. Yellow, with red cheek. Flesh yellow, melting, sweet and of the best flavor. Freestone. Sept.

Salway. A rather large, roundish yellow freestone, with a deep marbled brownish cheek; the flesh is yellow, firm, juicy, rich and sugary. A late showy market variety of English origin. Last of Sept.

Smock Free. Fruit large, oval; skin orange yellow, mottled with red. An excellent variety for market. Sept. 15.

Stump-the-World. Large, roundish; creamy white, with red cheek; flesh white, juicy, highly flavored. Free. End of Aug.

Triumph. The first yellow peach to ripen, with good eating and shipping qualities. Fruit of good size, yellow, with red and crimson cheek. Being the earliest peach so far known, it brings high prices in the markets. First of July.

Plums

Diseases and Enemies of the Plum. The prevalence of the disease of the plum commonly known as the "black knot," which has so much discouraged people in the Eastern states from giving to the plum its merited share of attention, has as yet done but little damage west of the Mississippi river, but its appearance should be guarded against, and its ravages prevented by keeping the trees in a healthy condition, which is done by good cultivation, and removing the knot by amputation on its first appearance. Nothing is more favorable to the growth of the black fungus or knot than neglect. But the great enemy of the plum is the insect known as the curculio, a small, dark brown beetle which punctures the fruit in depositing its egg from which is hatched the destructive grub, and causing the fruit to drop prematurely and rot. Two ways of destroying this curculio and saving the crop of fruit are recommended, viz:

First. Spread a large sheet, prepared for the purpose, under the tree and then jar the tree so as to shake down all fruits that have been stung, as well as all curculios; both insect and stung fruit are destroyed. Begin to do this as soon as the blossoms fall, and keep it up

PLUMS—Continued

daily, or at least tri-weekly, until the fruit is half grown. The morning is the best time to do this, when the insect is chilled and stupid.

Second. The best remedy and the one generally adopted now doubtless is the spraying of the trees, directions for which are given in the last pages of this catalogue. If those who really desire to grow fine crops of this most delicious fruit will try either of these systems and follow it up rigidly, they will be successful.

European Plums

Bradshaw. Very large; dark violet-red; flesh yellowish green, juicy and pleasant. Productive. Vig. Middle of Aug.

Damson. Small, oval; skin purple, covered with blue bloom; flesh melting and juicy, rather tart; separates partly from the stone. Mod. Sept.

German Prune. A large, long, oval variety much valued for drying; the color is dark purple; agreeable flavor. Vig. Sept.

Lombard (Bleeker's Scarlet). One of the most widely cultivated plums in America. Of medium size, round, oval, violet-red, juicy, pleasant and good; adheres to the stone. Vigorous and quite hardy. Valuable for market. Vig. Last of Aug.

Shipper's Pride. Originated in northwestern New York, and has never been known to freeze back a particle in the coldest winters. The fruit is large, dark purple; flesh firm and of excellent quality. Splendid for shipping or market. Vig. First of Sept.

Shropshire Damson. As free from the attacks of the curculio as the common Damson of the same color, and commands nearly double the price. Flesh amber, juicy and sprightly. Productive. Free. Last of Sept.

Native American Plums

Arkansas Lombard. An improvement on the Wild Goose and far superior in flavor. Fruit yellow, with red blush; flesh firm, meaty and luscious. Trees are vigorous and enormous bearers. Ripens two weeks later than Wild Goose. July.

Pottawatomie. Fruit yellow, overspread with a bright pink and white dots; flesh yellow, luscious and good. The tree is perfectly hardy and an immense early annual bearer. July.

Wild Goose. Large; rich crimson; flesh soft, rich, melting, delicious, with a full fruity flavor. The tree is a strong grower and very prolific. July.

Burbank.

PLUMS—Continued

Japanese Plums

These Plums have awakened more interest the past few years than any other recent type of fruit. They are of great beauty and productiveness. The fruit is firm and meaty and will keep for a long time, making them valuable for long-distance shipments. The fruit is exquisitely perfumed, with a charmingly attractive bloom.

Abundance (Botan). One of the best Japanese plums. It is one of the imported varieties, being catalogued under the name of Abundance on account of its wonderful bearing qualities. The fruit is large; handsome, and practically curculio-proof; lemon-yellow ground, nearly overspread with bright cherry, and with a heavy bloom; flesh orange-yellow, melting, rich and highly perfumed. The tree is an early and profuse bearer. July.

Burbank. A beautiful, large plum, of nearly globular form. The color is clear cherry-red, with a thin lilac bloom; flesh deep yellow, very sweet, with a peculiar and very agreeable flavor. The tree is vigorous, with strong, upright shoots, and commences to bear annually two years from planting. It blooms late and escapes the late spring frosts. Middle of Aug.

Red June. Medium to large; deep vermilion-red, with handsome bloom; flesh light lemon-yellow, slightly sub-acid, of good and pleasant quality; half-cling; pit small. The tree is vigorous, hardy, upright, spreading, and as productive as Abundance. One of the most valuable of the early varieties. August.

Wickson. Originated by Mr. Burbank, who says: "Among the many thousand Japanese plums I have fruited, so far, this one stands pre-eminent." The largest of this class; the color is deep crimson, covered with a light bloom; flesh tender, sweet and delicious; pit small. The tree is a vigorous grower and an early and profuse bearer. Ripens just after Burbank.

Willard. Earliest of all the Japanese plums, which makes it very valuable for market. Fruit of medium size, spherical to oblong; bright claret-red, with many minute dots; flesh firm, white; freestone. Strong, vigorous, hardy tree, and very productive. The fruit is very handsome when well ripened.

Cherries

There are few more desirable trees than the cherry, and they are being planted in larger quantities every year. No orchard is complete without its proportion of this fruit. It will succeed on any kind of soil that is dry.

The Heart and Bigarreau varieties do not succeed as well in the West and Southwest as in the East, but the Dukes and Morellos succeed everywhere. Cherries are now generally worked on the Mahaleb, a stock that does not throw up sprouts from the roots.

Black Tartarian.

Heart and Bigarreau Cherries

Black Tartarian. Very large; bright purplish black; juicy, very rich, excellent flavor; half tender. Productive. Vig. First of June.

Governor Wood. Very large; light red; juicy, rich and delicious. Tree healthy and a great bearer. One of the most valuable varieties. Vig. First of June.

Napoleon Bigarreau. A magnificent cherry of the largest size. Pale yellow or red; flesh firm, juicy and sweet. Very productive. One of the best for market or canning. Vig. Middle of June.

Duke and Morello Cherries

Compass Cherry. A cross between the Rocky Mountain cherry and the Native plum, and resembles both. The most remarkable fruit of recent origin. Hardy as any wild plum. Sweet, juicy and excellent flavor. Marvelously prolific bearer. Grows on any soil. Fruits every year. Bears second year after planting. Good shipper and a fine cooker.

Dyehouse. Resembles Early Richmond, but is of finer quality, quite as productive, and ripens a week earlier. It partakes both of the Morello and Duke, wood and fruit. Free. May and June.

English Morello. Medium to large; blackish-red; rich, acid, juicy and good. Very productive. Mod. July.

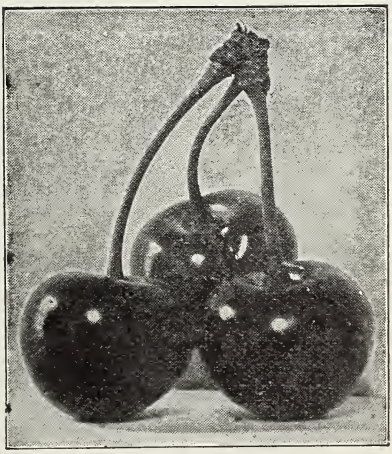
Early Richmond. (Kentish; Virginian, or Early May). The most hardy of all cherries, uninjured by the coldest winters when almost every other variety has been killed. Medium size; dark red; melting, juicy, sprightly acid flavor. Exceedingly productive. Unsurpassed for cooking and the most popular of the acid cherries. Free. First of June.

Large Montmorency. A cherry of the Richmond class, but larger and more solid, and fully ten days later. Fruit red, acid. Free. Middle of June.

Lutovka. One of the most promising of the new late sour cherries, received at the New York Agricultural Experiment Station. It is a Russian sort of the Morello type. Fruit firm, of good quality, sprightly acid, as large as English Morello and similar to that varietys in color, with the flesh not so dark. Very productive. Ripens a little later than English Morello.

Ostheimer. (Ostheimer Weichsel). Fruit large, dark liver-colored when fully ripe. This variety has done remarkably well and is the cherry for the West. A good grower, bears early and is very productive. A most valuable and profitable sort.

Wragg. Originated in Iowa. A variety much like English Morello, but larger, better and hardier. Medium to large, long stem; dark purple when fully ripe. Well adapted for the high latitude and prairie regions of the Northwest. July.



Early Richmond.

Nectarines

A most delicious, smooth-skinned fruit, which thrives wherever the peach will grow. Liable to be stung by the curculio, and requires the same treatment as plums. Commands a high price in the Eastern markets, as it is considered somewhat of a novelty.

Boston. Large; deep yellow, with a bright blush and mottlings of red; sweet and peculiarly pleasant flavor; freestone. The tree is hardy and productive. One of the most valuable varieties known. Vig. Aug.

Red Roman. Large; greenish yellow, with a dark, dull red cheek; flesh yellowish, fine and rich. Productive. Vig. Sept.

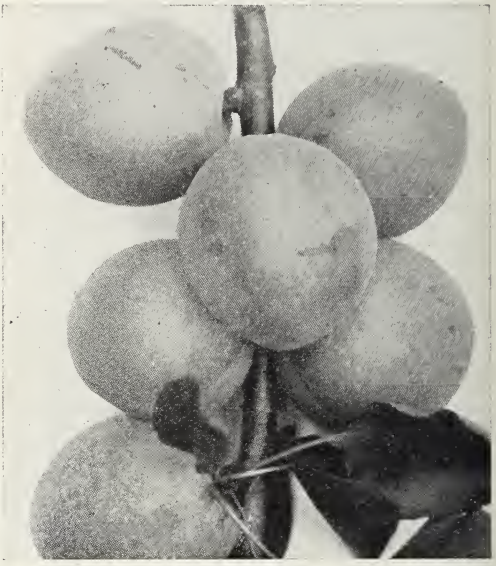
Apricots

The apricot is one of the most beautiful and delicious of fruits of the plum species. It ripens very early, which makes it of great value. It is liable to the attacks of the curculio and requires the same treatment as plums.

Early Golden. (Dubois.) Small; pale orange; juicy and sweet. Hardy as the Russian and productive. Vig. First of July.

Moorpark. One of the largest. Orange, with a red cheek; firm, juicy, with a rich flavor. Very productive. Vig. July.

Russian. Its extreme hardiness and fine quality of fruit make it very valuable.



Early Moorpark Apricot.

Quinces

The quince is of late attracting a good deal of attention, both for home and market purposes, because of its many uses, such as canning, preserving and for flavoring other fruits, and because of its commercial value on the markets. It flourishes in any good garden soil, but well repays special and careful cultivation. The following is one of the best modes:

Late in the autumn give the soil a top-dressing with potash, or wood-ashes, which is the best, though slaked lime or cow-manure will do. Sprinkle some salt over the ground and then cover with a heavy mulching of straw or litter, say 6 or 8 inches thick, to prevent the roots from severe freezing, and in the spring remove the mulching, placing it in piles near the trees, and cultivate the soil thoroughly until about the last of June or first of July, at which time replace the mulching, which should again be removed in October and replaced about one month later, after the ground has been top-dressed as above directed, and continued in this way from year to year.

Apple or Orange. Large, roundish; bright golden yellow; cooks tender and is of excellent flavor. The tree is very productive. Valuable for preserves or flavoring. Sept.

Champion. Originated in Connecticut. The fruit averages larger than the Orange, more oval in shape, quality equally fine and a longer keeper. The tree is very prolific and a constant bearer. Vig. Oct. and Nov.

Meech's Prolific. The most prolific and vigorous quince yet introduced, young trees bearing profusely large, beautiful golden fruit, as handsome as the finest oranges; the flavor is unsurpassed.

Mulberries

Downing's Everbearing. Blue-black; flesh juicy, rich, sugary, with a sprightly vinous flavor. The beauty of this variety as a lawn or street tree is enough to commend it, as well as an abundant yield of large berries for about three months, which are much relished.

New American. Equal to Downing in every respect. Fruit of the largest size; black; delicious in flavor. Makes a fine lawn tree of rapid growth; hardy.

Russian. This also makes a good shade and ornamental tree, growing full and symmetrical, holding its leaves until late in the fall. Color of fruit varies, but is generally black. Bears fruit at two or three years of age. Said to be very desirable in the culture of silk-worms.

Dwarf Service, or Juneberry

Resembles the common Service, or Juneberry, in leaf and fruit, but the fruit is larger and almost black, commencing to bear profusely the second year after transplanting. Grows 4 to 6 feet high and branches out from the ground like currants. Valuable as a dessert fruit and should be on every farm or garden.

Delaware. Niagara. Worden. Brighton.

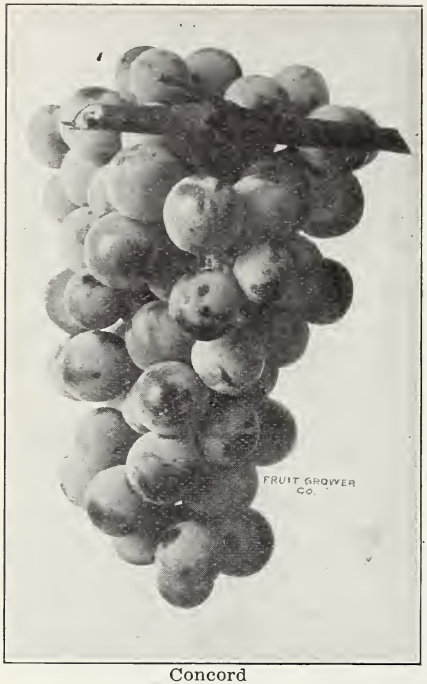
Grapes

The grape is the most satisfactory fruit to raise and is at home in the West. Its history is almost as old as that of man. Vineyards were extensively planted before orchards or collections of other fruit trees were at all common, and today it is one of the most highly appreciated fruits. No fruit will give better returns for close attention and kind care, and good returns can be had from soils which are unfit for other crops. They can be trained up the sides of any building or over a garden fence, but the best and cheapest way to grow them either in small or large quantities is on the wire trellis. Careful pruning is necessary for good crops, and should be done when the vine is entirely dormant.

Plant in rows 8 feet apart and 6 to 8 feet in the row, in deep, cultivated ground, and a little deeper than when in the nursery. Some of the tender varieties are benefited by laying the vines flat on the ground during winter, with a light covering of earth or litter.

Black Grapes

Campbell's Early. The vine is strong, hardy and of vigorous growth, with thick, heavy, healthy foliage. Berries borne in large clusters, nearly round, large, of a glossy black color, with a beautiful blue bloom; pulp sweet and juicy; free from foxiness; seeds small, few in number, and parts readily from the pulp. Ripens with Moore's Early, but, unlike that variety, keeps sound and perfect for weeks after ripe. Valuable for shipping. Originated by the late Geo. W. Campbell by crossing Moore's Early with pollen of a seedling from a cross of Muscat-Hamburg with Belvidere.



Concord

GRAPES—Continued

Concord. The most popular grape in America. Bunch and berries large, round; skin thick and covered with bloom; flesh juicy and sweet. The vine is very hardy, vigorous and productive.

Moore's Early. A Concord seedling. The entire crop ripens before its parent. Bunch medium; berries large, with blue bloom; flesh pulpy, of medium quality. The vine is hardy and moderately productive. Very profitable for market on account of its earliness and handsome appearance.

Worden. A splendid grape of the Concord type, but earlier; larger in bunch and berry, and of decidedly better quality. Vine as hardy, and in every way as healthy.

Red Grapes

Brighton. A cross between Concord and Diana Hamburg. Bunch large, well formed, berries of medium size; purple, flesh tender, sweet, of best quality. Ripens early. Showy for table or market.

Catawba. The famous wine grape. Bunches large and loose; the berries are large, of a coppery color, becoming purple when fully ripe. Ripens late. A good variety, but often rots.

Delaware. Conceded to be one of the finest grapes. The bunch is small, compact and shouldered; berries rather small; skin thin; flesh very juicy, without any hard pulp, with a very sweet, spicy and delicious flavor. The vine is moderately vigorous, very hardy and productive.

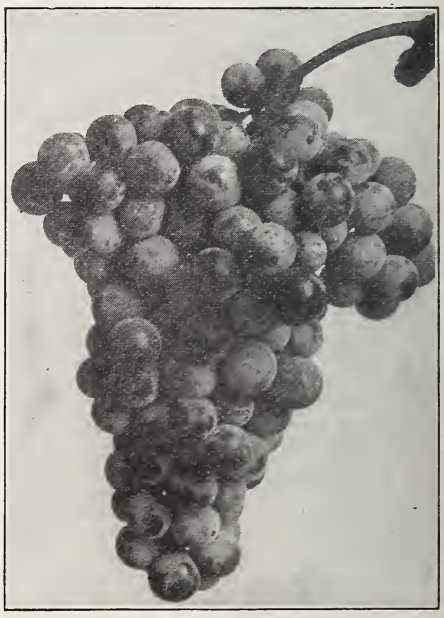
Wyoming Red. A very early, medium-sized red grape. Bunch small, compact, skin bright red; sweet. A slight foxy odor is apparent when first gathered.

Woodruff Red. One of the hardiest Grapes; a rank grower and very healthy. Bunch and berry large, shouldered and attractive; sweet and of fair quality. Desirable for market. Ripens soon after Concord.

White Grapes

Moore's Diamond. Very hardy, healthy and vigorous. A white dessert grape, with a sweet, sugary taste. Ripens two weeks before the Concord.

Niagara. Occupies the same position among the white varieties as Concord among the black. Bunch very large and handsome, sometimes shouldered, compact; berries large, round, with a tough skin and of good quality, have not much pulp when fully ripe. The leading, profitable market grape. Ripens about with Concord. Succeeds well both North and South, and is very largely planted by vineyardists.



Moore's Early.

Raspberries

The raspberry thrives on strong soil, well manured, thoroughly cultivated and mulched freely. For field rows, plant 6 feet apart and 3 feet in the row. In garden culture, tie up to single wire. Cut out the old and weak shoots each year. Raspberries may be made very profitable with good cultivation.

Red Raspberries

Cardinal. A hybrid of the red and black raspberry. Of great size, a handsome reddish purple in color, and of excellent quality. The plant is extremely hardy and produces immense crops. Should be planted in home gardens everywhere. Profitable for commercial planting.

Cuthbert (Queen of the Market). Large, conical; rich crimson. The fruit is so firm that it can be shipped hundreds of miles in good condition. Flavor sweet, rich and luscious. Very strong and hardy, standing the Northern winters and Southern summers equal to any variety.

Loudon. Canes strong and hardy; berries large, of good color and fine quality. Very desirable for home or market use on account of its productiveness and fine quality.

Cumberland.

Miller. Extremely hardy, very productive, and one of the earliest to ripen. An excellent shipper, of good quality and attractive color. The bush is stout, healthy and vigorous, bearing very heavy crops.

St. Regis. Fruit commences to ripen with the earliest and continuing on young canes until October. Berries bright crimson, large size, rich sugary with full raspberry flavor. Flesh firm and meaty, a good shipper. Wonderfully prolific, the first or main crop equalling any red variety known. Canes stocky, of strong growth, with abundance of dark green leathery foliage.

Turner. A beautiful red berry, of fine size and excellent quality. One of the hardiest and most productive varieties known.

Blackcaps

Cumberland. The fruit is enormous, surpassing any other blackcap known. It has been thoroughly tested everywhere and gives general satisfaction. The fruit is firm and will stand long shipments, making it a very profitable berry. The bush is very healthy and vigorous, and the hardiest and most productive in cultivation. The quality is similar and equal to the Gregg.

Gregg. The best late blackcap and very popular for market. Canes of strong, vigorous growth, and under good cultivation very productive. Berries large, covered with heavy bloom, firm, meaty and of fine flavor. It is not entirely hardy, suffering during unusually severe winters. Requires good strong soil to produce best results. The standard blackcap by which others are judged.

Kansas. Originated at Lawrence, Kan. A blackcap which succeeds wherever tried and will soon supersede some of the older varieties. It is healthy, vigorous and not subject to leaf-blight, and produces strong, healthy tips; fruit large, very prolific. As fine a berry as Gregg and equally good for shipping.

Blackberries

In field culture plant in rows 8 feet apart and 3 feet distant in the rows; in garden culture plant rows 5 feet apart and 3 feet distant in the rows. The pruning should be governed by the growth of cane and should be severe. Pinch back the canes in summer when 3 feet high, causing them to throw out laterals.

Early Harvest.

Blowers. One of the hardiest and most productive, and of very finest quality. Of large size, jet black and ships well. Planting of this variety is on the increase, and is a favorite with many large commercial growers.

Early Harvest. A variety of great promise being very early and always reliable. A compact, dwarf grower.

Erie. Said to be the only large, productive, absolutely hardy blackberry grown. Fruit very large, of excellent quality.

Eldorado. One of the best blackberries for the North. Berries large, jet-black, borne in large clusters and ripen well together; very sweet, melting and pleasant; have no hard core, and keep from eight to ten days after picking with quality unimpaired. The vines are very vigorous and hardy. Enormous yielder.

Lawton. Very large and black; of excellent quality. An abundant bearer. The well-known market variety.

Himalaya Giant. A strong, rampant, trailing plant; very productive. Hardy, and thrives even under severe conditions. Fruit large, handsome and fine quality.

Snyder. Medium size; no hard or sour core; only half as many thorns as Lawton, and they are short. Extremely hardy and very productive. It leads where hardiness is a consideration.

Taylor. Fruit large, and of best quality, melting and without core. Very productive and as hardy as the Snyder. One of the largest blackberries grown.

Dewberries

Lucretia. One of the low-growing, trailing, blackberries. Fruit large, luscious and handsome. Perfectly hardy, strong grower and exceedingly productive. The vines give the best results when allowed to remain on the ground during winter and started up early in the spring. We highly recommend this variety for market.

Gooseberries

This fruit is useful for cooking when green or ripe, and it may be canned with such facility that it is beginning to be cultivated very extensively for both home use and market.

Manure heavily and prune closely to produce large, abundant crops. The English varieties do not require much pruning. Close pruning and heavy mulching prevents mildew. Plant 3 to 4 feet apart each way.

Downing. Considered one of the most valuable varieties. Larger than Houghton, roundish; light green, with distinct veins; skin smooth; flesh rather soft, juicy and good. Vigorous and productive.

Houghton. A medium-sized American variety, which bears abundant and regular crops, and never mildews. Fruit smooth, red, tender and very good.

Industry. Said to be the best English gooseberry yet introduced. Berries large, 1½ inches in diameter; of most excellent flavor, pleasant and rich; dark red when fully ripe. Vigorous upright grower. Much less subject to mildew than other English sorts.

Josselyn (Red Jacket). An American seedling that rivals the foreign varieties in size.

GOOSEBERRIES—Continued

Berries large, smooth, ruby-red and of fine flavor. A strong, thrifty grower, entirely free from mildew; very hardy and exceedingly productive. Has been well tested over a wide territory and has proved very satisfactory.

Pearl. American seedling. Berries one-half larger than Downing; rich and sweet. It has a vigorous, healthy bush, free from mildew; enormously productive. Promises to be the most valuable American variety of recent introduction.

Currants

To get best results plant in a cool, sheltered, moist location about 3 feet apart in rows 4 feet apart. As they are perfectly hardy, they can be planted in the fall and are not injured by the cold winter weather. To destroy the curculio, dust with white hellebore when the dew is on the bush.

Black Champion. Bunches very large; flavor very delicious. Fruit hangs on the bushes a long time.

Cherry. The largest of all the red currants. Berries very large; bunches short. The plant is very vigorous and productive when given good soil and cultivation.

Perfection.

Downing.

Fay's Prolific. Deep red; first-class quality and not quite so acid as the Cherry; the stems are longer and the berries hold their size to the end of the stem better. Most prolific and best red currant.

North Star. Bunches average 4 inches in length; the berries from a single bunch, thirty in number, placed side by side, touching, covered a line 12 inches long. Fruit sweet, rich and firm. Good for market, desirable for dessert in natural state and one of the best for jelly.

Perfection. This is a cross between Fay's Prolific and White Grape. Color red; as large or larger than Fay's and clusters average larger. Prolific.

Red Dutch. An old standard sort. A great bearer and very profitable for the market.

White Grape. The best table variety. Large, yellowish white; sweet or very mild acid; of excellent quality. Very distinct, having a low, spreading habit and dark green foliage. Very productive. The most valuable white sort.

Wilder. A remarkable variety both for table and market. Bunch and berry very large; bright, attractive, red color, even when dead ripe; hangs on bushes in good condition a long time. One of the strongest growers and most productive.

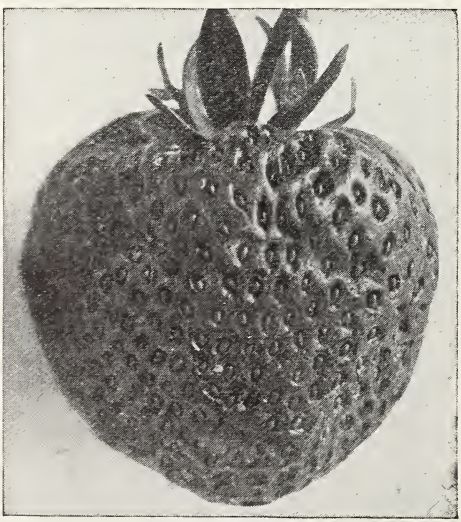
Strawberries

The Strawberry is undoubtedly the queen of fruits. It is the first to ripen and the quickest to come into bearing. Those entering into field culture of strawberries for commercial purposes, without practical experience will hardly depend on the brief directions given here. Full instructions as to cultivation will be freely given upon application.

The Soil and Its Preparation. The ground should be worked 18 or 20 inches deep, and be properly enriched as for any garden crop; drainage is necessary in very wet soil.

Cultivation. For family use, plant 15 or 18 inches apart each way, and after a few strong plants have set from runners, then pinch off all runners as fast as they appear; keep the ground free of weeds, and frequently stirred with a hoe or fork. Plants treated in this manner will produce more crowns and yield therefore double the amount of well-developed fruit than when runners are left to grow.

Covering in Winter. Where the winters are severe, it is well to give the ground a light covering with coarse straw or litter. This covering should not be placed on until the ground is frozen. Fatal errors may be made by putting on too much and too early. If coarse straw is used, it may be left on until the plants have done fruiting, taking care to open it up around the plants early in the spring, so as to give them plenty of sunlight and air.



Senator Dunlap.

The blossoms of those marked with a letter (P) are destitute of stamens and are termed pistillate, and unless a row of a perfect-flowering variety is planted at intervals not exceeding every third or fourth row, they will produce imperfect fruit and but little of it; but, when properly fertilized, as a rule, they are more prolific than those with perfect flowers.

Aroma. S. Very large, roundish, conical, rarely misshapen; glossy red, of excellent quality, and very productive. The plant shows no weakness of any kind.

Bederwood. S. Large, roundish, conical, bright scarlet; moderately firm, fair quality. The plant is vigorous and very productive. This is a very desirable early berry for either home use or near market.

Bubach No. 5. P. Even under neglect of cultivation this is a wonderful berry in vigor of plant and yield of fruit. Large and handsome, and, in many instances, enormous. Exceedingly productive and esteemed for nearby markets. Midseason.

STRAWBERRIES—Continued

Clyde. P. A strong and healthy plant, forming berries and runners freely. This variety has made much progress and given entire satisfaction.

Captain Jack. S. Berries large, handsome and solid, of excellent quality. Very vigorous grower, healthy and productive.

Dunlap. S. Large and handsome; rich dark red, with glossy finish, shading to deep scarlet on under side. Uniform in size and shape.

Excelsior. S. Early. Large, firm, high colored and well shaped. Immensely productive; plant is large and robust.

Gandy. S. Large and firm; berries bright crimson, very uniform in size and shape. Plant vigorous and healthy. A reliable and valuable late strawberry.

Haverland. P. Profitable on account of its productiveness and earliness, but hardly firm enough for distant shipment. Fruit large, handsome and good, but not of the best quality; rather long and of bright glossy crimson. Early.

Marshall. P. Very large, roundish; dark, rich crimson; very good and firm. The plant is vigorous and productive. Medium to late.

Warfield No. 2. P. One of the most popular varieties today. Pleasant, sub-acid, good. The plant is a vigorous grower, with bright, healthy foliage. Early.

Windsor Chief. P. Fruit of large size to the end of the season. A vigorous grower, with healthy foliage; immensely productive.

Asparagus

This delicious vegetable should be found in every garden. Nothing can be more easily grown and no other plant will give so much good, healthful food for so little outlay.

Dig the soil deeply, and mix together with well-rotted manure or compost. Plant in rows 2 feet apart. The plants should not exceed a foot apart in the rows and planted about 4 inches deep. On approach of winter cover with manure and fork the beds over lightly in the spring.

Barr's Mammoth. A great favorite. A fine large sort, the stalks of which measure an inch in diameter, and retain their thickness nearly to the top.

Conover's Colossal. A mammoth variety of vigorous growth, sending up fifteen to twenty sprouts from 1 to 2 inches in diameter each year. The color is deep green and crown very close.

Palmetto. Earlier, a better yielder, more even and regular in growth than Conover's Colossal and equal in quality.

Asparagus.

Rhubarb

Rhubarb ranks among the best early vegetables. It affords the earliest material for pies and tarts, continues long in use and is valuable for canning. Make the soil very rich.

Linnaeus. Large, tender and fine. Early. The best of all.

Victoria. The most valuable for market on account of its gigantic growth.

Ornamental Department

Suggestions to Planters. The extremes in temperature in this country are so great and the changes often so sudden that it is safe only to plant the most hardy ornamental trees and shrubs. Those varieties that will grow in the nursery when young without protection in winter may be regarded as safe to plant in parks and extensive grounds and in lawns and small places. Yet a few of the most beautiful sorts are not perfectly hardy and will be greatly benefited by some protection during severe winters. A judicious selection from the many varieties given in this catalogue will enable the planter to accomplish his desire in securing that which will give him satisfaction, both in hardiness and in effect.

For Parks and Extensive Grounds. In making selections of trees for this purpose there can be no difficulty, as there will be places for some of all the popular strong-growing sorts as well as many places for the smaller and more ornamental varieties, which are frequently planted in groups, and when by a proper selection so that there may be a succession of flowering and a variety of coloring of the foliage in the autumn, they make a picturesque appearance. But it cannot be too strongly urged upon planters the importance and value of flowering shrubs for effective masses and groups. All the hardy varieties, such as Altheas, Forsythias, Weigelas, Calycanthus, Deutzias, Snowball, Hydrangeas, Lilacs, Syringas, Fringe (purple and white), Thorns, Almonds, Peonies, Phlox and many others, when arranged either in groups or properly distributed, produce a magnificent effect, and what grand masses

of bloom can be had throughout the season by proper use of the various families. The purple and variegated-leaved trees and shrubs may also be planted in such a manner as to afford a rich and striking contrast.

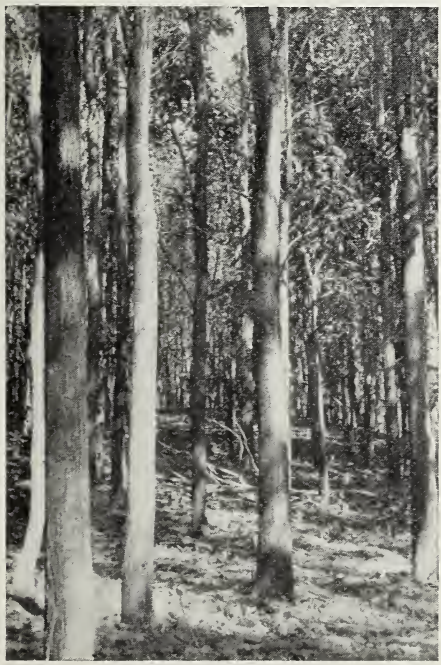
For Lawns and Small Places. A little more care may be taken in making selections for this purpose, although the selections will depend very much on the size of the ground to be occupied. Where only a few trees and shrubs can be planted, the medium or small-growing sorts, and those that display the finest appearance both in foliage and flowers, should be used. While on larger places a more extensive assortment can be planted.

Evergreens. It is unnecessary to argue in favor of the planting of this noble species of ornamental trees. Their stately appearance has too often caught the eye of the admirer of beautiful landscapes, parks, lawns and home places and left its lasting impression on the mind to be forgotten or overlooked in arranging the planting of even small grounds. Nothing is more beautiful than a well-arranged group of select evergreens, and when properly distributed, singly over the grounds, their appearance adds greatly to the scenery.

When and How to Plant, Prune, Etc. The same directions as are given in the front pages of this catalogue will apply to ornamental trees and shrubs. Little pruning is necessary on the Pines, Spruces, etc. It is necessary to shorten and thicken the growth and preserve the shape and this should be done just before the buds begin to swell in the spring. Arbor Vitaes, Junipers, Cedars, etc., can be shortened in or sheared any time during the growing season. Too much care cannot be taken to keep the roots of evergreens from being exposed to the atmosphere while out of the ground, and a protection the first year from the sun and winds by a lattice work of thin lath will aid in securing the life and growth of many evergreens.

Deciduous Trees

AILANTHUS glandulosa (Tree of Heaven). A rapid-growing tree from Japan, with long, elegant, sumac-like foliage, which gives it a tropical effect. Exempt from all diseases and insects.



Catalpa Speciosa.

ALDER, European (Alnus glutinosa). A tree of rapid growth. Is valuable for planting in cold, damp ground, but succeeds well everywhere.

Imperial Cut-leaved (A. glutinosa imperialis laciniata). The leaves are deeply and beautifully cut, giving the tree a striking appearance.

ASH, American White (Fraxinus Americana). A beautiful and desirable shade tree, also valuable for timber. It grows very rapidly.

BIRCH, European White (Betula alba). A beautiful tree, with white bark and graceful foliage. A graceful and hardy species of drooping habit. Desirable as single specimen or planted among other trees for contrast.

Purple-leaved (B. alba purpurea). Has beautiful purple foliage, as dark as the Purple Beech. Is very desirable for the lawn.

BUTTERNUT, or WHITE WALNUT (Juglans cinerea). A fine native tree, producing a large longish nut, which is sought after for its sweet and edible kernel. Fine for lawn or orchard planting.

CATALPA Bungei. A dwarf species when on its own root, and makes a curious, compact tree or shrub with a globular head, even more symmetrical than the Umbrella China tree of the South. Absolutely healthy and hardy; its branches are numerous and short, and the broad leaves lie as shingles on a roof, making a dense shade. Is very effective for lawn and terrace decoration.

Catalpa Bungei.

Speciosa. Especially ornamental in June when laden with its profusion of white flower panicles. More upright and symmetrical in growth than the common Catalpa. Possesses wonderful durability, which makes it a valuable timber for fence posts, railroad ties, etc. A strong, quick grower.

CHESTNUT, American (Castanea Americana). A large and beautiful well-known forest and nut-bearing tree. Few trees combine such vigor and grand stature, with so many other good qualities. Planted extensively for profit and ornamental purposes.

Chestnut, Japan or Giant (C. Japonica). A small tree from Japan. Very ornamental, hardy and productive of enormous-sized nuts as sweet as the American species; bears very young.

CHERRY, Double White-flowering (Cerasus avium alba flore plena). No garden is complete without the bright, cheerful aspect of the Flowering Cherry. The flowers are so numerous as to hide the branches and show nothing but a mass of bloom, each flower resembling a miniature white rose. May.

CRAB APPLE, Bechtel's Double-flowering (Pyrus coronaria fl. pl.). The finest of the many beautiful varieties of the Flowering Crab Apples. Tree of medium size, covered in early spring with large, double, fragrant flowers of a delicate pink color, having at a distance the appearance of roses. It is without doubt one of the handsomest trees grown.

DOGWOOD, White-flowering (Cornus florida). A beautiful American species of fine form, growing from 16 to 25 feet high. The large, white flowers are produced in spring before the leaves appear. The leaves are green, turning to a deep red in autumn. Indispensable for lawn or landscape.

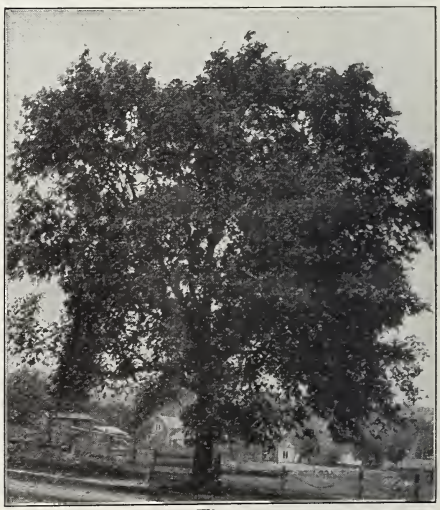
ELM, American White (Ulmus Americana). The most distinct tree adorning American landscapes. Fine for parks.

HORSE-CHESTNUT, White-flowering (Æsculus Hippocastanum). Is a very desirable tree for producing heavy shade, making it valuable for street planting. Produces an abundance of showy white flowers on erect panicles in early spring. Bears large inedible nuts.

JUDAS TREE, or RED BUD, American (Cercis Canadensis). A small Western tree, with a wealth of floral beauty in the spring before the leaves appear. Nothing can be more beautiful in April or May than a large, round-headed Red Bud, covered with its pretty flowers, before the bursting of a single leaf.

KŒLREUTERIA paniculata (Varnish Tree). A small tree, with a handsome, round head, native of China. Fine lobed leaves, which change to a fine yellow in autumn, and large panicles of showy golden flowers the last of July. A handsome tree and very desirable on account of its flowers coming when few trees are in bloom.

LABURNUM vulgare (Golden Chain). Very few of the flowering trees can surpass the beauty of the Golden Chain, with



Elm.

its smooth, shining foliage and bright yellow, pea-shaped blossoms produced in beautiful hanging clusters.

LIQUIDAMBAR styraciflua (Sweet Gum). One of the best of our native trees. Of medium size, round-headed or tapering, with leaves somewhat resembling the maple, but are star-shaped and of a beautiful green in summer, changing to deep purple crimson in autumn; bark corky. Unsurpassed in beauty by any other tree.

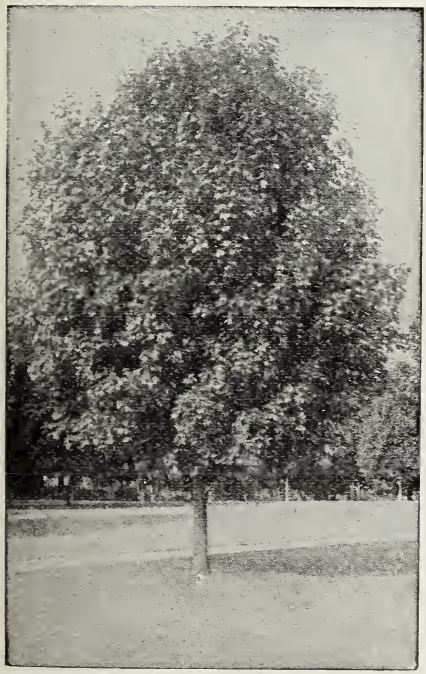
LOCUST, Black or Yellow (Robinia pseudacacia). A large native tree of rapid growth, and valuable for shade or ornamental purposes. The white flowers are very fragrant and borne in drooping racemes in May or June.

Honey, or Three-thorned Acacia (Gleditschia triacanthus). A rapid-growing tree, with delicate foliage of a fresh, lively green color, and strong thorns. Forms an almost impenetrable hedge if closely planted and severely clipped.

Rose, or Moss. A native species of spreading, irregular growth, with long, elegant clusters of rose-colored flowers in June and at intervals all season.

LINDEN, American, or Basswood (Tilia Americana). A large, native tree, forming a broad, round-topped crown. Large leaves and fragrant flowers. Desirable for street, lawn or park planting.

Norway Maple.



Weir's Cut-Leaf Maple.

European (T. Europœa). Generally grows regular and conical, and, when planted alone, develops finely, with its branches sweeping the ground. One of the most valuable trees for the lawn, developing into handsome specimens.

MAGNOLIA acuminata (Cucumber Tree). One of the largest Magnolias, forming a fine pyramidal-shaped tree. The flowers are yellowish white, medium-sized, and appear in June. The fruit, when green, resembles a small cucumber, but when ripe is a deep scarlet. A most valuable hardy shade tree.

Soulangeana (Soulange's Magnolia). Among the hardiest and finest of the foreign Magnolias. Its blossoms are from 3 to 5 inches across, cup-shaped, white and rosy violet.

MAPLE, Ash-leaved, or Box Elder (Acer Negundo). A fine rapid-growing variety, with spreading head and handsome light green permeated foliage; very hardy. Fine for avenue planting.

Norway (A. platanoides). One of the best ornamental trees for street, lawn, park or cemetery planting in cultivation. A foreign variety, with large, broad leaves of a rich, deep green color.

Maple, Schwedler's (A. Schwedleri). The young shoots and leaves of this beautiful variety are a bright purplish and crimson color, changing to purplish green when the leaves get older.

Silver-leaved (A. dasycarpum). This Maple may be seen along the street of almost every town or village. Of very rapid growth, hardy and easily transplanted.

Sugar, or Rock (A. saccharum). Much used for shade in lawn and park plantings. The tree is very stately and has fine foliage which has a brilliant autumn coloring.

Wier's Cut-leaved (A. dasycarpum Wierii laciniatum). A Silver Maple with beautiful dissected foliage. Of rapid growth; the shoots are slender and drooping, giving it a very graceful appearance. A great favorite and of deserved popularity.

MOUNTAIN ASH, European (Sorbus aucuparia). A beautiful medium-sized tree, with stems erect, smooth bark, and a symmetrical, round head. Bright scarlet berries cover the tree during fall and winter. Very much admired for its showy appearance.

Oak-leaved (S. quercifolia). A handsome tree of erect habit and rich green foliage which is deeply lobed. Very hardy and desirable for planting on lawns or in yards.

OLIVE, Russian. An ornamental tree of special value, growing to a height of 30 feet or more. The bark and leaves are light green when young, the bark getting darker and the leaves more silvery white as the tree grows older. The blooms are in small racemes 3 inches long, with a sweet and spicy fragrance, and are borne profusely in June.

OAK, Pin (Quercus palustris). The most popular of all the Oaks. The foliage is deep green and finely divided; assumes a drooping form when it acquires age.

Red (Q. rubra). An American species of large size and rapid growth. Deeply cut green leaves. Makes a splendid lawn or shade tree.

Scarlet (Q. coccinea). Especially valuable for its brilliant scarlet fall color. Grows well in dry situations. Leaves are large and feathery.

PAULOWNIA imperialis (Empress Tree). An odd-looking tree with leaves that often measure 18 inches across and bears long panicles of purple flowers in June. If cut back to the ground each year, the roots send up rapid-growing branchless trunks that produce a unique and tropical effect.

Silver Maple.

PEACH, Double Red, White and Camellia-flowered. No garden is complete without one or more trees of the beautiful double-flowered forms of the Peach. They thrive in almost any soil and may be grown wherever the typical form is hardy.

Blood-leaved. A very curious tree. The foliage is as dark as the Purple Beech.

PERSIMMON, American (Diospyros Virginica). A small, native tree, with pleasing shining foliage. Is valuable also for its well-known fruit.

PLUM, Purple-leaved (Prunus Pissardi). A handsome small tree, with purple foliage and black bark, and retains its color throughout the summer. The new growth is especially bright. It also produces a delicious red fruit which, with its foliage, makes it a beautiful ornamental tree. One of the best of purple-leaved trees, the hot sun not affecting the leaves.

POPLAR, Balsam (Populus Balsamifera). A tall tree with stout, erect branches, forming a narrow, pyramidal head. Of very rapid growth, and has large, glossy foliage.

Bolleana. Similar to the well-known Lombardy Poplar in habit, but broader, and,

like it, useful in breaking the monotony of lower round-topped trees. Will grow to a tall spire 80 feet high. Its leaves are glossy green above, silvery beneath.

Carolina (P. Caroliniensis). This is the finest Poplar and more extensively planted in cities for quick effect than any other variety. Of good form and succeeds everywhere. Makes a splendid windbreak or screen, and is used in larger numbers than any other shade tree. Resists smoke and gas.

Lombardy (P. nigra fastigiata). A well-known, tall, erect-growing tree of rapid growth and spire-like outline. Very desirable in landscape planting to destroy the sameness and give variety to the other trees. An avenue of this variety is a beautiful sight.

Silver-leaved (P. alba). A rapid-growing tree, with leaves that are silvery white on their under surface. At a distance, when the wind turns the under surface of the leaves up it gives it the appearance of a tree covered with white blossoms.

SALISBURIA adiantifolia (Maidenhair Tree or Ginkgo). A graceful and picturesque tree, with yellowish green leaves, curiously lobed and marked with delicate hair-like lines. A valuable ornamental tree, and useful for street and avenue planting, and is generally free from insects and diseases.

SOPHORA JAPONICA, Japan Pagoda Tree. Low-growing tree from Japan; dark green bark; clusters of white pea-shaped flowers in August; glossy foliage.

SYCAMORE, American Plane or Buttonwood (Platanus occidentalis). One of our tallest well-known trees. Valuable for planting in the city streets as it is remarkably free from diseases and withstands the smoky atmosphere.

TULIP TREE (Liriodendron Tulipifera). A magnificent native tree of the Magnolia species. A large and stately rapid-growing tree, with rich, glossy foliage. The flowers appear the first week in June and are large, tulip-like, with a greenish yellow color, blotched orange. Hard to transplant unless of small size. Plant only in spring and prune closely.

WALNUT, Japan, Sieboldi. Perfectly hardy, rapid grower, handsome form, immense leaves; bears young and abundantly; one of the finest ornamental trees. Nuts produced in clusters; resembles Butternut in shape and quality; smaller; with smooth and thinner shell.

WILLOW, Rosemary-leaved (Salix rosmarinifolia). Leaves long, silvery white, branches stiff, covered with a whitish down. An effective and pleasing tree. Budded 5 to 7 feet from the ground it makes a very handsome tree.

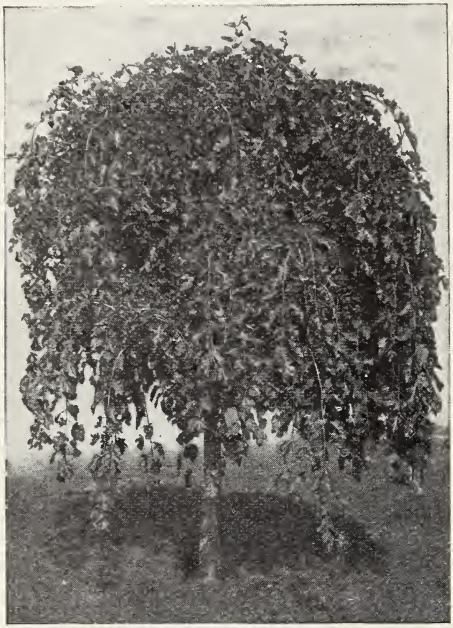
Laurel-leaved (S. pentandra). Beautiful, large, glossy foliage that shines conspicuously in the sunlight. A strong grower along the water edges or on high ground.

Willow, Royal. A handsome tree with rich, silvery foliage. Is very desirable.

YELLOW WOOD (Virgilia lutea). The most beautiful of all the leguminous or pea-blossoming trees. It produces panicles of creamy white, fragrant flowers, 15 inches or more long; bark smooth and polished; the leaves are remarkable for their purity of color. Nothing is finer as a single specimen for the lawn.

Weeping Deciduous Trees

Much attention is now given to this class of trees, and we place them separately for the convenience of our customers. The superior grace and beauty of the weeping varieties render them especially adapted to yard, lawn or cemetery. No collection is complete without them. Among ornamentals they have no superior.



Weeping Mulberry.

BIRCH, Cut-leaved Weeping (Betula laciniata pendula). A tall tree, with gracefully pendulous branches and deeply cut foliage. A superb lawn tree and very much admired.

ELM, Camperdown Weeping (Ulmus scabra pendula). A very picturesque and graceful form with drooping branches. They overlap so regularly that a compact, roof-like head is formed. One of the best of the weeping trees.

MOUNTAIN ASH, Weeping (Sorbus aucuparia pendula). A beautiful tree, with straggling, weeping branches. A fine lawn tree and good for covering arbors.

MULBERRY, Teas' Weeping (Morus Tatarica pendula). A weeping variety of the now well-known Russian Mulberry. A graceful, hardy tree, forming a perfect umbrella-shaped head, with long, slender, willow branches drooping to the ground. The foliage is small, lobed and of a fresh, glossy green color. Very hardy and of rapid growth. Valuable for the cemetery and can be trained into almost any shape.

WILLOW, Common Weeping (Salix Babylonica). The well-known common Weeping Willow. A large tree, covered with drooping branches.

Thurlow's Weeping (S. elegantissima). Similar to the common form, but more spreading in habit and of greater hardiness; the foliage is about the same, and has grayish green bark.

Kilmarnock Weeping (S. Caprea pendula). Exceedingly graceful, forming an umbrella-like canopy, the branches eventually sweeping the ground. A distinct variety having reddish shoots and large, glossy foliage.

Wisconsin Weeping (S. Babylonica dolorosa). The leaves are whitened on the lower surface. Perfectly hardy, withstanding the winters of the Far North without injury.

Evergreen Trees

ARBORVITAE, American or White Cedar (Thuya occidentalis). One of the finest medium-sized evergreens for screens or hedges. It is very hardy, there being very few places where it will not thrive. It bears shearing better than any other variety and may be made to grow into almost any desirable form. More extensively planted than any other.

Compacta (T. occidentalis compacta). Upright, compact and very symmetrical; very hardy, retaining its beautiful green color all winter. One of the finest of the Arborvitaes.

Golden (T. aurea). A beautiful variety of the Chinese Arborvitaes. Compact and globular in form. Lively, yellowish green color.

Globe (T. globosa). Originated at Philadelphia). Grows naturally into a rounded, almost ball-like form. Very desirable for grouping.

Hovey's Golden (T. Hoveyi). A seedling of the American, with fine foliage of a bright yellow-green color; it inherits the hardiness of its parent, and is distinct and beautiful.

Pyramidal (T. pyramidalis). Similar to the American, having dark green, compact foliage and very erect form. It is perfectly hardy. The most beautiful variety, and well adapted for formal planting and lawn specimens.

Siberian (T. Sibirica). One of the best of the genus. A slower grower and more compact than the American, of which it is a variety. The foliage is thicker, more luxuriant and retains its color well into the winter. Hardy.

FIR, Balsam, or American Silver (Abies balsamea). A regular symmetrical ornamental tree of conical form, even when young; the leaves are dark green above and silvery beneath. Hardy.

Concolor (White Fir). A picturesque Colorado species; long, leathery leaves, with glaucous tinge when young, becoming pale green with age. Branches arranged in horizontal whorls. A grand tree, making splendid specimens.

JUNIPER, Virginian (Juniperus Virginiana). This is the common well-known form of Red Cedar. It is usually compact and conical; very hardy and grows in unfertile places.

Glacious (Red Cedar). Is very desirable on account of its distinct, compact conical habit, and its silvery foliage.

Irish (J. Hibernica). Very erect in its growth, forming a dense, conical outline which resembles a pillar of green. Is very useful in formal plantings.

Savin (J. Sabina). A low spreading tree, with dark green foliage. Very valuable for rockeries, groupings and borders, contrasting to other low-growing trees.

PINE, Austrian, or Black (Pinus Austriaca). A tall massive species from the mountains of Syria; the branches are spreading, with long, stiff, dark green leaves. Very hardy.

Scotch (P. syvestris). A native of the British Islands. Its rapid growth makes it suitable for screens and shelter-beds. Bluish foliage and ragged shoots. Thrives even on the poorest soils.

White (P. Strobus). A grand old favorite and the most ornamental of all our native Pines. The foliage is light, delicate or silvery green. It withstands hardships and grows in the most barren soils.

Mountain, or Dwarf (P. Mughus). Forms a dark, dome-shaped bush broader than its height and sometimes almost prostrate. Leaves short, stiff, a little twisted and thickly distributed over the branches. Fine for lawn specimens or evergreen groups.

SPRUCE, Norway (Picea excelsa). This familiar Spruce is more generally useful than any other variety. It is a lofty tree of pyramidal habit and very elegant and rich. With age it has fine, graceful, pendulous branches; very popular as an evergreen hedge. Is very picturesque and beautiful.

Colorado Blue (P. pungens glauca). This Spruce has been tested through the West and Northwest with perfect success, enduring a temperature of 30 degrees below zero in exposed situations without injury. It is also beautiful in color and outline, the foliage being of a rich blue or sage color. Makes an ornamental tree of great beauty.

Hemlock, or Weeping (Tsuga Canadensis). A very graceful and beautiful native tree, with drooping branches and delicate dark foliage, like that of the yew. Distinct from all other evergreen trees. Valuable as a lawn specimen; no other evergreen is better adapted for hedges.

Colorado Blue Spruce.

Ornamental Shrubs

ALTHEA (Rose of Sharon; Hibiscus). Familiar shrubs and valuable because of their flowering in the fall when most other shrubs are out of bloom. Hardy and of easy cultivation.

Ardens. Double; violet; very large and distinct.

Boule de Feu. Very double; light rose; large. One of the finest red varieties.

Duchesse de Brabant. Double; reddish lilac flowers; large. A strong grower and one of the very best.

Jeanne d'Arc. Best of the double whites. Hardy and a free bloomer.

Pompon Rouge. Double, 3½ to 4 inches across; light rose. Is vigorous and fine.

Pulcherrima. Very large, double white, shaded pink; strong grower. One of the best.

Totus albus. Single; large, pure white.

Variegated-leaved Double Purple. Very showy and distinct. Leaves variegated with light yellow; flowers double, purple. Very fine.

ALMOND, Dwarf Double Rose-flowering (Amydalus communis rosea fl. pl.). A beautiful shrub, with small, double rosy blossoms closely set upon the branches before the leaves appear.

Dwarf Double White-flowering (A. communis alba fl. pl.). Same as preceding except that the color is white.

ARALIA Japonica. A handsome and distinct shrub, with large, tripinnate leaves and spiny stems; flowers white, in large spikes in August.

Pentaphylla. Desirable for mass planting; slender, prickly branches; leaves palmate, five-lobed and pale green.

Spinosa. (Hercules' Club). Valuable for producing tropical effects.

BARBERRY, Common (Berberis vulgaris). An erect, sturdy-growing shrub, with clusters of yellow flowers in May or June, followed by dark red berries that last through the winter.

Purple-leaved (B. purpurea). Habits similar to the above, but the foliage and fruit are dark purple, which makes it very desirable for foliage contrast.

Thunberg's (B. Thunbergii). An invaluable little shrub from Japan that fits in with

almost every planting. Of dwarf, graceful habits; the foliage is small, changing to beautiful bright red early in the fall.

CALYCANTHUS floridus (Sweet-scented Shrub). An old-fashioned shrub of strong, upright habit. The flowers and wood have a rare and peculiar fragrance; the blooms are borne abundantly and are of a chocolate color.

CARAGANA arborescens. A very hardy, tall shrub, similar to the Laburnum in appearance, bearing pea-shaped, yellow flowers the first week in May.

CARYOPTERIS mastacanthus (Blue Spirea). A pretty shrubby plant, producing clusters of beautiful fragrant flowers in great profusion from September until frost. Valued for its lateness of flowers.

CEANOTHUS Americanus. A low-growing shrub, with panicles of white flowers in June.

CEPHALANTHUS occidentalis (Button Bush). A tall-growing shrub with globular heads of white flowers in July.

CLETHRA alnifolia (Sweet Pepper Bush). White, fragrant flowers in August. Good for shady places.

COLUTEA arborescens (Bladder Senna). Ornamental free-flowering shrub of compact and rapid growth; dull green leaves; yellow and brownish red flowers, borne in long racemes, followed by red bladder-shaped seed-pods.

CURRANT, Crimson-flowering (Ribes sanguineum). Small, deep red flowers in long, drooping racemes in early spring. Is very ornamental.

Double Crimson-flowering (R. sanguineum fl. pl.). A variety of the above with double flowers in July. A most beautiful flowering shrub.

Gordon's (R. Gordonianum). The flowers are crimson and yellow in pendent branches in May. Hardy and a profuse bloomer.

DEUTZIA gracilis (Slender-branched Deutzia). A dwarf species from Japan. The flowers are pure white. Fine for pot culture as it flowers freely at a low temperature in the winter.

Crenata fl. pl. Flowers double white, tinged with rose. One of the most desirable shrubs in cultivation.

Candidissima. The pure snow-white, double flowers are of great beauty, and valuable for bouquets and baskets. Exceedingly dainty and beautiful.

Pride of Rochester. Raised from D. crenata fl. pl., producing large, double white flowers, the back of the petals slightly tinged rose. The flowers are larger, panicles longer and a more profuse bloomer than the older sorts. Very vigorous. A charming acquisition.

Lemoinei. Without doubt one of the most important new hardy plants offered in many years. Large, pure white flowers, produced in broad-based, cone-shaped heads, which open out very full.

DESMODIUM Japonicum (Podocarpum). This is really not a shrub, being herbaceous, but it pushes up from the base so shrub-like that it is sometimes classed as one. The flowers are white, appearing about September 15.

Penduliflorum (Lespedeza Sieboldi). Character same as the above, but blooms a few days earlier, and bears sprays of rose-colored flowers at a season when but few other shrubs are in bloom. Valuable for planting in beds or groups of shrubs.

Deutzia.

White Dogwood.

DOGWOOD (Cornus). Cornelian Cherry (C. mascula). Bright yellow flowers in May, followed by scarlet berries in autumn.

Red-branched (C. Siberica). The blood-red branches make it very conspicuous and ornamental in winter. The flowers are greenish white.

ELÆAGNUS argentea (Silver-leaved Oleaster). A large native shrub, with beautiful silvery foliage and small yellow flowers in July and August.

ELÆAGNUS angustifolia. A large shrub, sometimes of tree form, with long, narrow, silvery green foliage. The flowers are yellow, followed by yellow fruit.

Longipes. A handsome, shapely, silver-leaved shrub, with reddish branches in winter; perfectly hardy and of easy growth with bright yellow flowers in June. The greatest value of this shrub is in the fruit, which is produced in great abundance along the whole length of the branches; it is oval in shape, about 1½ inches long and of a deep orange-red color.

ELDER, Golden (Sambucus nigra aurea). A handsome shrub, with golden yellow foliage and clusters of pure white flowers. Excellent for lawn planting.

Cut-leaved (S. nigra laciniata). The foliage of this variety is deeply cut and incised, lending an airy, fern-like aspect. Very vigorous growth.

Red-berried (S. racemosus). Produces white flowers in May, followed by red fruit. Very hardy.

Variegated-leaved (S. nigra variegata). A hardy, variegated species. Makes a fine and showy appearance.

EUONYMUS Americanus (Strawberry Bush). Very ornamental and showy, its brilliant dark red berries, which hang in clusters from the branches until mid-winter is its chief beauty. The contrast is very fine when planted with a background of evergreens. Leaves scarlet in autumn.

Europaeus (European Euonymus). A large, erect shrub, or low tree, sometimes 30 feet high; the fruit is rose-colored.

EXOCHORDA grandiflora. A vigorous-growing shrub, forming a neat, compact bush, 10 to 12 feet high; flowers pure white, borne in slender racemes, of eight to ten florets each. Perfectly hardy. Unquestionably one of the floral gems.

FILBERT, Purple-leaved (Corylus purpurea). A large shrub, with deep purple leaves. Very ornamental and produces fine edible fruit.

FORSYTHIA (Golden Bell) **viridissima.** A large, hardy shrub, with dark green leaves and bright yellow flowers very early in spring.

Aurea Variegated (Golden-leaved Forsythia). Leaves marginated with deep yellow, hardy.

Fortunei (Fortune's Forsythia). Of upright growth, with deep green foliage and bright yellow flowers.

Intermedia. Erect in growth, somewhat slender, very profuse in bloom.

Suspensa (Weeping Forsythia). Of graceful, drooping habit; the flowers resemble those of Fortunei.

HALESIA tetraptera (Silver Bell). Drooping branches laden in spring with pretty white, bell-shaped flowers resembling those of the Fuchsia.

HONEYSUCKLE, Pink Tartarian (Lonicera Tatarica). An old-fashioned shrub, with bright pink flowers which appear in May, followed by crimson berries.

Jap. Bush Honeysuckle (L. Morrowi). A spreading variety growing 4 to 6 feet tall; blooms early in spring with pure white flowers, followed by pretty red berries.

Fragrant (L. fragrantissima). A spreading shrub, with deep green foliage and small fragrant flowers which appear before the leaves; the foliage is almost evergreen.

Siberian (L. Alberti). Dwarf. Half-trailing shrub, with tiny leaves and deliciously fragrant, violet-blue flowers.

White Tartarian (L. Tatarica alba). Similar to the Red Tartarian, but with dull white flowers.

HYDRANGEA paniculata grandiflora. From July to November there is no shrub more showy than this favorite Hydrangea. Its large, showy panicles of white flowers

hang in the greatest profusion. It is quite hardy and very beautiful planted as a single specimen on the lawn or in the margin of masses. Prune severely in the spring to produce the largest flowers.

Arborescens grandiflora sterilis (Hills of Snow). Pure white, the flower-clusters remaining intact long after the leaves have fallen. Grows 5 to 6 feet high, and when in full bloom is one of the most striking as well as the most beautiful shrubs of its season.

KERRIA (Corchorus) Japonica. A slender, green-branched shrub, 5 to 6 feet high, with globular yellow flowers from July to October.

Double-flowering Corchoras (Flora plena). It blooms profusely from the last of June until autumn, with double globular flowers.

Variegated-leaved Corchorus (Variegata). This is not so vigorous in growth as the preceding. It has decided white markings on the leaves.

LILAC, Persian (Syringa Persica). The lilac among shrubs is like the maple among trees. This variety is a native of Persia and grows from 4 to 6 feet high, with small foliage and bright purple flowers.

White Persian (S. Persica alba). White flowers delicately tinted with rose.

Large-flowering White (S. alba grandiflora). A beautiful variety, with large panicles of pure white flowers. Considered the best white variety.

Common (S. vulgaris). The well-known, old-fashioned lilac, so often seen in gardens. The flowers are bluish purple and very attractive.

Rouen (S. Rothomagensis). A distinct hybrid variety, with reddish flowers; the panicles are of great size and very abundant. One of the finest lilacs.

Varieties of Syringa Vulgaris (Lilac)

Abel Carrier. Double flowers, large, blue, reverse of petals rose.

Charles X. Single. Strong rapid grower; trusses large, rather loose; reddish purple. Very popular.

Charles Joly. Double. Very dark reddish purple; superb.

Emile Lemoine. Double. Flowers very large, rosy lilac.

Leon Simon. Double. Panicles compact; flowers bluish crimson.

Ludwig Spaeth. Single. Panicles long; individual flower large, dark purplish red. The finest of its color.

Madame Lemoine. Double. White; superb.

Marie Legraye. Single. Panicles of white flowers. One of the best.

Purple Fringe.

President Grevy. Double. A beautiful blue; very large; the panicle is magnificent, measuring 11 inches in length and 5 inches across. One of the finest lilacs.

LESPEDEZA bicolor (Shrubby Bush Clover). Small purple flowers produced in nodding racemes.

MYRICA cerifera. A low-spreading shrub, with handsome foliage and small white berries in autumn. Partially evergreen.

PLUM, Flowering (Prunus triloba). Semi-double flowers of a delicate pink, closely set along the slender branches, early in spring. A valuable addition to the early shrubs, and very ornamental.

PURPLE FRINGE (Smoke Tree; Rhus Cotinus). A shrub or small tree of spreading habit, covered in midsummer with a profusion of dusty, fringe-like flowers. Very much admired and desirable for the striking peculiarity of its flowers.

PRIVET, Common (Ligustrum vulgare). A tall shrub, with delicate foliage, white flowers in dense, upright panicles and bunches of black berries. In warmer climates it is evergreen, the leaves hanging on very late. Valuable as a hedge plant.

California (L. ovalifolium). A large shrub of upright habit, nearly evergreen; produces delicate white flowers in great profusion; they possess a pleasant heliotrope fragrance. This is the most popular hedge plant.

Amoor (L. Amurense). Erect habit; almost evergreen. More hardy than California.

Chinese (L. Ibota). Flowers large, white, very fragrant, produced in great profusion; the leaves are long and shining.

Regel's (L. Regelianum). Spreading branches. A prostrate form of the Chinese Privet.

PHILADELPHUS (Syringa or Mock Orange). All the species and varieties have white flowers, many of them quite fragrant. They are vigorous growers and are very valuable for backgrounds, screens, groupings and specimens.

Avalanche. This is a graceful shrub, with slender, arching branches, covered almost the whole length with showy white flowers.

Coronarius (Common or Garland Mock Orange). A well-known, hardy shrub, with pure white, sweet-scented flowers. One of the first to flower.

Grandiflora (Large-flowered Mock Orange). Conspicuous and showy, with large flowers and irregular branches.

Foliis aureis (Golden-leaved Mock Orange). A pretty dwarf form with golden yellow foliage. It retains its color throughout the season. Valuable for contrasting with purple-leaved shrubs.

Lemoinei erectus. Upright growth; flowers fragrant, yellowish white, completely covering the plant.

Mont Blanc. Of upright growth, and small leaves; flowers very fragrant.

POTENTILLA fruticosa (Shrubby Cinquefoil). A shrub producing numerous bright yellow flowers, blooming throughout the summer; thrives in either dry or wet soil; excellent for rockeries.

PTELEA trifoliata (Hop Tree). A large shrub or small tree, with clusters of white flowers in June.

Aurea (Golden-leaved Hop Tree). Beautiful glossy golden foliage.

RHODOTYPOS Kerrioides. From Japan. A medium-sized ornamental shrub, with handsome foliage and large, single white flowers late in May succeeded by numerous small fruits.

RHUS (Sumac) **Cotinus.** See Purple Fringe.

Aromatica (Fragrant Sumac). A spreading shrub; small yellow flowers in clusters or short spikes appear before the leaves; thick and fragrant foliage. In autumn the foliage turns to a dark crimson.

Glabra (Common Sumac). The foliage in autumn is a brilliant crimson, and the ovoid terminal panicles of fruit are bright purple.

Glabra laciniata (Dwarf Cut-leaved Sumac). Finely divided leaves, crimson in the fall.

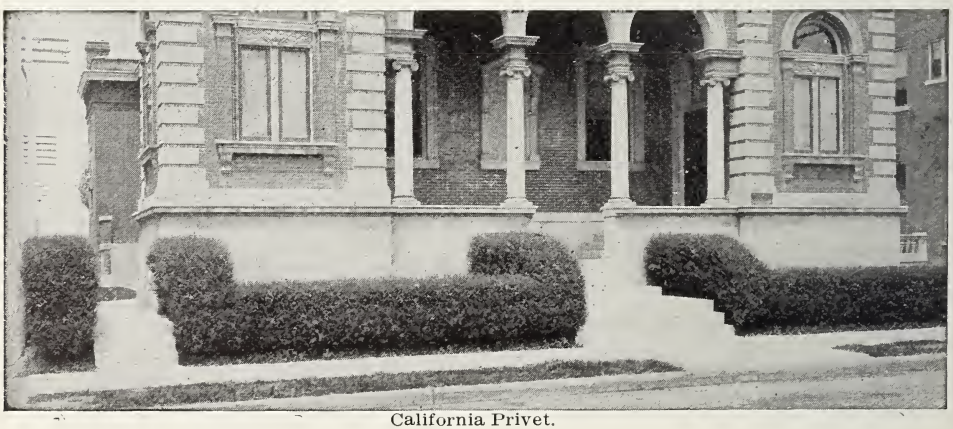
Copallina (Mountain Sumach). A good species, with dark green, glabrous leaves. The branches and stalks are downy, and the leaf-stems are margined with wings.

Typhina laciniata (Staghorn Sumac). A large shrub, with brilliant foliage and scarlet fruit in autumn.

SALVIA Greggii. A new hardy everblooming red flowering shrub. Extremely hardy. A great drouth resister. It flourishes and blooms profusely in the hottest and driest weather. The color is a lovely shade of red. Grows three to four feet high, and three to four feet wide in a compact globe. Very full and neat in appearance.

SNOWBERRY (Symphoricarpus racemosus). A small shrub, with clusters of rose-colored flowers, early in spring, followed by waxy white berries, which hang on through part of the winter. Quite hardy and very ornamental.

SPIRAEA Bumalda. A very handsome Japanese species of dwarf, compact habit. A mass of bright rose-colored flowers cover the plant during midsummer and autumn.



California Privet.

Arguta. It resembles somewhat S. Thunbergii but is of even more slender habit. In early spring it is a perfect mass of snow-white bloom on long, pendent branchlets.

Anthony Waterer. An improvement on Bumalda, forming a low bush 1½ feet high, covered all summer with small flat heads of bright pink or solferino flowers. Beautiful for edging and desirable in front of shrubbery.

Billardi (Billard's Spirea). Erect branches, crowned with narrow, dense spikes of rose-colored flowers nearly all summer.

Callosa alba (Fortune's Dwarf White Spirea). All summer there are white flowers in flat clusters on this bushy shrub. Dwarf habit.

Douglasi. Spikes of beautiful deep rose-colored flowers in July and August.

Rosea. Panicles of pretty rose-colored flowers.

Prunifolia (Plum-leaved Spirea). Flowers white and very double, like English daisies, which bloom profusely in April. The foliage turns a beautiful bronze color in autumn. An old-fashioned erect shrub that is still popular.

Reevesiana, or lanceolata (Lance-leaved Spirea). Narrow pointed leaves and large, round clusters of white flowers that cover the whole plant.

Sorbifolia (Ash-leaved Spirea). Leaves of this variety resemble those of the Mountain Ash; flowers appear in July and are white, in long elegant spikes.

Thunbergii (Thunberg's Spirea). A graceful blush, with innumerable small white flowers; leaves narrow. Valuable for forcing. Very early flowering.

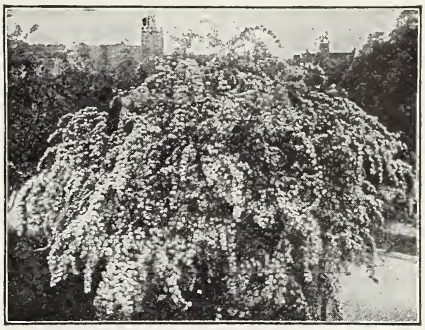
Van Houttei. Among the very finest of flowering shrubs and the most charming and popular Spireas. It has pure white flowers an inch in diameter, in clusters or panicles. The profusion of bloom weighs the slender branches down and covers the bush with a canopy of white. The plant is remarkably vigorous and hardy. Excellent as a single plant or for grouping.

Opulifolia aurea. Golden yellow tinted leaves and double white flowers in June. A very conspicuous and valuable variety.

Tomentosa. Flowers in deep panicles. Valued for low places and wild effects.

TAMARIX, Africana. Small leaves somewhat like the Juniper, and delicate, small pink flowers in spikes in May. Very ornamental at the back of shrubbery.

Gallica. Delicate pink or white flowers in slender panicled racemes; leaves bluish green.



Spirea Van Houtte.

Japonica. A handsome Japanese form, with pink flowers in lateral sprays from 1 to 2 inches long on previous year's branches.

VIBURNUM Lantana. A large, robust shrub, with soft, heavy, lantana-like leaves and large clusters of white flowers in May, succeeded by red fruits; retains its foliage very late.

Opulus (High-Bush Cranberry). Its red berries, resembling cranberries, hang until destroyed by frost late in the fall. Flowers white in drooping flat cymes.

Plicatum (Japan Snowball). A rare and very beautiful species. Pure white flowers in globular heads. One of the best ornamental shrubs. Grows 6 to 8 feet high, and erect and compact.

Sterilis. The old-fashioned Snowball. Of large size, with globular clusters of white flowers in June.

VITEX Agnus-castus coerulea. Blue flowers. Blooms through August and September. Is valuable on account of blooming when so few flowers are in bloom.

Alba. White flowers.

WEIGELA Desboisi. Deep rose-colored flowers, resembling Rosea, but much darker. One of the darkest varieties.

Eva Rathke. The very best red-flowered variety. A continuous bloomer.

Rosea. A strong grower and profuse bloomer. Flowers pink, rose and white. May and June.

Van Houttei. Dark rich crimson flowers in great abundance; darker than Desboisi.

Folia variegata. The leaves are bordered with yellowish white and finely marked. Flowers bright pink.

Candida. This is the best and most popular white variety. Of large size, erect and vigorous growth. Produces pure white flowers in June and July in great profusion. A

valuable feature is that it blooms moderately throughout the summer, making it very valuable.

WHITE FRINGE, Virginian (Chionanthus Virginica). A large shrub that grows easily and is generally desirable. Superb foliage and delicate fringe-like white flowers in open clusters, succeeded by small bluish plum-like fruits.

XANTHOCERAS sorbifolia. A very popular new shrub. The flowers are white, with crimson center, and expand about the middle of May. It should be severely pruned when transplanted.

Evergreen Shrubs

These "Broad-leaved Evergreens" are being used more and more each year because they are so desirable and effective in landscape work. As a rule, they transplant easily, are quite hardy, and give immediate results.

HOLLY, Green-leaved (Ilex aquifolium). Deep green, glossy foliage, with bright red berries though the winter. The berried twigs are familiar decorations at Christmas time.

MAHONIA aquifolia (Holly-leaved Ashberry). Glossy, holly-like leaves which change to brownish green in winter. Clusters of bright yellow flowers in May. Makes a good hedge, and desirable for rockeries and shrubbery groups.

Hedge Plants

The value of hedges in ornamental planting, for screens and the protection of orchards, farms and gardens is being realized. They also protect the fruit against the fierce winds, as there is not so much danger from blowing off. Some writers tell us that the temperature is warmer in the vicinity of evergreens. However this may be, we know that our gardens are earlier and our fruits ripen better when protected by such screens.

Evergreen and deciduous hedges are becoming very popular as boundary lines between neighbors, or divisions between the lawn and garden, and deservedly so, for nothing is more beautiful than a well-kept hedge. By using medium sized plants, a hedge can be made very cheaply, every year becoming more and more "a thing of beauty."

To secure a good hedge, dig a deep, wide trench and work the soil thoroughly about the roots; press the ground firmly, and mulch heavily for a distance of 2 or more feet on either side, according to the size of the plants. This is especially necessary with evergreens, and all the exposure of the roots to the sun and air must be avoided.

Evergreens should be pruned in the spring just before they commence growing. Arborvitaes, Cedars, etc., may be pruned in the summer.

ARBORVITAE, American. One of the finest evergreens for screens. It is very hardy, easily transplanted, grows rapidly and with little care. In three or four years it forms a most beautiful, dense hedge.

Siberian. This is also well adapted for hedges. Of a rich color and more compact than the American. Very hardy.

SPRUCE, Norway. Forms a beautiful and desirable screen or shelter. Where a rapid and high growth is required, as for sheltering from cold winds, planting on the borders of grounds and plantations this is the most valuable hedge. With careful pruning it can be kept low and in good shape, thus making it highly ornamental.

For shelter belts and screens in orchards and other places, we recommend the **Norway Spruce** (page 31), **Scotch** (page 31), **Austrian** (page 31), and **White Pines** (page 31).

Deciduous Hedge Plants

PRIVET. The most popular and universally planted deciduous hedge. Plant 6 to 8 inches apart and keep cut back well after the first year. When trained well is one of the most ornamental hedges for lawns and cemeteries.

The following are also very desirable hedge plants: **Barberries** (page 32), **Roses** (page 41), **Altheas** (page 32), **Spireas** (page 36), **Tartarian Honeysuckle** (page 34).

Hardy Climbing Vines

AMPELOPSIS Veitchii (Boston Ivy; Japan Creeper). The most popular ivy for covering buildings and walls. The foliage is smaller than the American and more dense, forming a sheet of green. The plant is a little tender when young and should be protected the first winter; when once established, it grows rapidly, the tendrils holding tenaciously to any support. The foliage changes to crimson in fall, which makes it a very beautiful ornament to a brick or stone structure.

Englemanni. Choice variety, with small, glossy green foliage, and disk-like tendrils, which enable the vines to attach themselves to stone and woodwork. Particularly desirable where the Boston Ivy is not sufficiently hardy, or where a more rustic effect is desired.

Tricolor. A charming vine, with fine deep green foliage, beautifully variegated with white and pink. In August it becomes densely covered with berries of bright porcelain blue color.

Quinquefolia (Virginia Creeper). A native variety of rapid growth, with large, luxuriant foliage, which assumes a beautiful rich crimson color in autumn. The inconspicuous blossoms are succeeded by handsome dark blue berries. The vine is supposed to take the place of the English Ivy, and in summer is not inferior to that variety.

AKEBIA quinata. A perfectly hardy, fast-growing Japan vine with magnificent foliage and large clusters of chocolate-purple flowers possessing a most delicious perfume. Unsurpassed for covering trellises and verandas, as the foliage is never attacked by insects. Is very handsome and graceful.

BIGNONIA radicans (Scarlet Trumpet Flower). Our well-known native species, with clusters of large trumpet-shaped scarlet flowers in August.

Grandiflora (Large-flowering Trumpet Flower). The flowers are larger and earlier than the preceding, but the vine is not so hardy.

CELASTRUS scandens (Bittersweet; Staff Tree). A well-known native climber of powerful growth; the foliage is bright and shining. Is quite ornamental in winter on account of its orange-scarlet seed vessels, displaying their crimson seeds. Should be largely planted, as it is one of the most luxuriant climbers grown.

DOLICHOS, Japonica (Kudzu Vine). A most worthy ornamental vine. Rapid grower, bearing rosy purple, pea-shaped flowers in August.

CLEMATIS. The different varieties of Clematis now in cultivation vary greatly in their foliage and flowers, and are adapted to various uses. The large-flowered varieties, when trained on trellis and over porches, pillars and rockwork, producing their great masses of bloom, make a beautiful appearance, especially when contrasting colors are in proximity. Good, deep, sandy loam, mulched in winter with well-rotted manure, in partial shade and a liberal supply of water at the roots, will produce vigorous plants and rich sheets of bloom.

Clematis.

Henryi. Large, pure white, handsome flowers. One of the best long bloomers among this class of climbers.

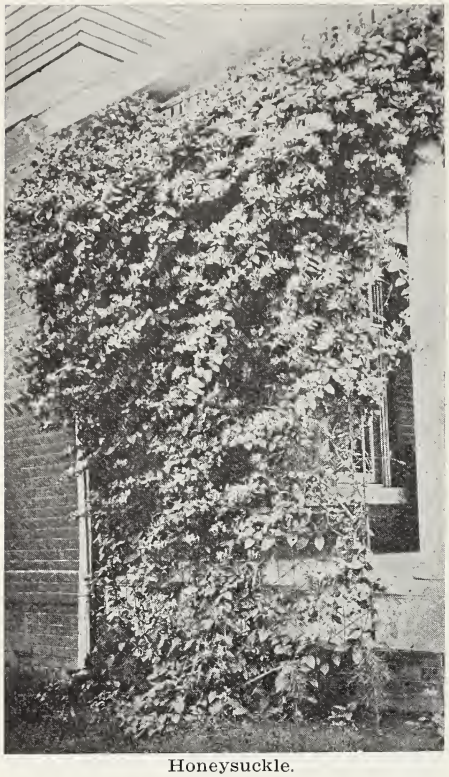
Jackmani. This is the most popular large-flowering variety. The flowers are from 4 to 6 inches in diameter, of an intense violet-purple color, borne successionally in continuous masses on the summer shoots. Generally considered the best Clematis of its color.

Jackmani alba. A fine variety of the preceding, but with pure white flowers; large-flowering.

Mme. Edouard Andre. A great novelty. Flowers large, of beautiful bright velvety red; very free-flowering and continue all summer.

Ramona. A strong, rampant grower and very hardy. A free and perpetual bloomer of very large, deep sky-blue flowers.

Paniculata (Sweet-scented Japan Clematis). A Japanese plant possessing unusually attractive merits. Of very rapid growth, quickly covering trellises and arbors with handsome, clean, glossy green foliage. The



Honeysuckle.

flowers are of medium size, pure white, borne in immense sheets and of a most delicious fragrance. The flowers appear in September, a season when very few vines are in bloom.

HONEYSUCKLE, Monthly Fragrant (Lonicera Belgica). Very sweet, red and yellow flowers all summer.

Common Woodbine (L. Periclymenum). A strong, rapid grower. The flowers are very showy, being red outside and buff inside. June and July.

Chinese Twining (L. Japonica). Blooms in July and September and is very sweet. Holds its foliage nearly all winter.

Golden Honeysuckle (L. Brachypoda). A beautiful sort, foliage handsomely marbled with gold, often showing tinges of pink in its young growth.

Hall's (L. Halleana). The most popular variety. Nearly evergreen. The flowers are pure white, changing to yellow, produced abundantly and have the fragrance of the jessamine. Probably more grown than any other variety.

Scarlet Trumpet (L. sempervirens). This and its varieties are the handsomest in cultivation. A strong, rapid grower, producing scarlet, inodorous flowers all summer.

Semperflorens. A profuse bloomer of yellow flowers tinged with white; not so fragrant as Halleana.

POLYGONUM Baldschuanicum. Hardy, woody, twining plant. Its flowers are white, and borne in large, feathery sprays at the extremities of the branches throughout the summer and autumn.

LYCIUM Chinese (Matrimony Vine). A hardy plant that serves as a vine or shrub. Slender, drooping branches bear pink and purple flowers from June until September, and are succeeded in winter by scarlet and orange fruits. This vine grows anywhere, and is on this account, a good plant to withstand abuse and neglect.

VINCA Minor (Common Periwinkle or Blue Myrtle). Evergreen verdure and handsome blue flowers. Compact, creeping habit, forming a solid covering.

WISTARIA, Chinese (Wistaria Sinensis). A rapid-growing, tall vine, with handsome foliage and flowers, which are produced in long, pendulous clusters of a pale blue color. It is very hardy and one of the most superb vines ever introduced.

American White. A native seedling with pure white flowers on short bunches. A free bloomer.

List of Trees and Shrubs for Special Purposes

For the benefit of patrons who have not had opportunity of observing the general growth and appearance of various kinds of trees, evergreens and shrubs, we give the following lists, by which they will be better enabled to make selection, descriptions of which can be seen in their proper places in this catalogue.

Trees Adapted to Streets, Avenues, Parks and Large Grounds

White Elm
Flowering Horse-Chestnut
American Linden
European Linden
Norway Maple
Sugar or Hard Maple
Silver or Soft Maple
Catalpa
Lombardy Poplar
Tulip Tree
Carolina Poplar
White Ash
Box Elder

Trees, Evergreens and Shrubs for Parks, Extensive Grounds, City Lots, Etc.

Cut-leaved Alder
Cut-leaved Weeping Birch
Catalpa
Dogwood
Horse-Chestnut
Judas Tree
Koelreuteria
Laburnum
Liquidambar
Lindens (all varieties)
Magnolia
Maples, Wier's Cut-leaved
Purple-leaved and Norway
Mountain Ash (all varieties)
Mulberry (all varieties)
Plum (Prunus Pissardi)
Salisburia
Tulip Tree
Weeping Elm
Kilmarnock Weeping Willow
Wisconsin Weeping Willow

Evergreens

ARBORVITAES—
American, Compacta
Golden, Globe, Hovey's
Golden, Pyramidal,
Siberian.

BALSAM FIR

PINES—
Austrian, Scotch, White
and Dwarf.

JUNIPERS—
Irish, Savin, Red Cedar.
SPRUCE—
Excelsior, Colorado, Black.
HEMLOCK

Shrubs

Altheas (all varieties)
Almonds, Dwarf, White,
Pink
Barberry (all varieties)
Calycanthus
Deutzias, Assorted
Elders (all varieties)
Forsythia
Filbert, Purple-leaved
Halesia
Honeysuckle
Hydrangea paniculata
grandiflora
Lilac (all varieties)
Fringe, Purple, White
Snowberry
Spirea (all varieties)
Snowball (all varieties)
Syringas (all varieties)
Weigelas (all varieties)

Roses

Hybrid Perpetual, or Remontant Roses

The Hybrid Perpetual Roses comprise the roses for the multitude. They are mostly hardy, vigorous and of easy cultivation. As a general rule, they thrive best in well-prepared loam. Close pruning is generally required, but should be regulated to some extent by the rate of growth of each variety, those of vigorous habit not requiring so much as those of slow growth. The colors range from the purest white to the deepest crimson. The term perpetual might lead some to think that they are as constant bloomers as the everbloomers, but this is not the case. They flower freely in June and at short intervals during the summer and fall.

Remedy for Mildew. The mildew is perhaps the most injurious disease. It is generally caused by extremes of heat and cold, and by a long continuance of damp, cloudy weather. The best remedies are sulphur and soot; one of these should be applied as soon as the disease makes its appearance. It is a good plan to sprinkle the plants with water so that the substance applied will adhere.

Alfred Colomb. Bright, clear carmine-red; large and of good form; very fragrant. One of the best of its class.

American Beauty. An everblooming hybrid perpetual. The flowers are very large, of beautiful form and very double; deep rich rose color. Its fragrance resembles La France. This is the most popular rose grown.

Anna de Diesbach. A beautiful shade of carmine; moderately full and very large. A vigorous grower and fine bloomer. One of the really good roses.

Black Prince. Dark velvety crimson, almost black. A good grower and a most magnificent rose.

Baron de Bonstetten. Rich velvety maroon; large, full and fragrant. A splendid sort.

Frau Karl Druschki (See page 42).

ROSES—Continued

Clio. The flowers of this magnificent rose are perfect in form, with fine, broad petals. The color is a delicate satin blush, with a light shading of rosy pink at the center. Very free-blooming and a strong, healthy grower. The flowers are very beautiful at all stages of development.

Conrad Ferdinand Meyer. This rose has Rugosa blood in its make-up and is classed by some as a hybrid Rugosa; the best hybrid perpetual ever known. This is a grand rose, a vigorous grower, and free bloomer; flowers large, perfectly double, cup-shaped. Color deep, bright vivid, intense pink, with the penetrating fragrance of the old June roses.

Coquette des Alps. White, lightly shaded with carmine; of medium size; a free bloomer.

Dinsmore. Deep crimson, large and very double; flowers very freely the whole season. The plant is very dwarf and bushy, every shoot producing a bud.

Frau Karl Druschki. Pure paper-white, large and free-flowering. A very handsome plant with bright, heavy foliage and strong upright growth. The bloom is of perfect form, on fine long stems. The finest rose in color, form and general finish.

General Jacqueminot. Crimson-scarlet; very showy and effective. A magnificent variety.

George Dickson. The introducers of this new rose say: "This is the best rose ever raised by us. We make this statement advisedly and with a full sense of our responsibility. As near as we can describe it, the color is a velvety-black crimson, the back of the petal being heavily veined with deep pure crimson-maroon. The petals are of splendid shape; of magnificent substance; delightfully smooth, and built to make the form of flower perfection. It has wonderful lasting qualities, not only as to the retention of its color, but also in its shape and freshness."

Gen. Jacqueminot.

Hermosa. Beautiful clear rose; very double and fragrant, blooming in clusters; hardy and a constant bloomer. One of the best roses.

J. B. Clark. The color is unique among roses, being deep scarlet shaded blackish-crimson, with a rich bloom like a plum; flowers are large and beautifully formed.

Jules Margottin. Light, brilliant crimson; large, full and beautiful.

John Hopper. Deep rose, with crimson center.

La Reine. Deep rosy lilac; large, full, sweet and double.

Marshall P. Wilder. Resembles Alfred Colomb in color, but said to be more vigorous and hardy.

Mme. Chas. Wood. Flowers extra large, full and double, of a deep rosy crimson color, sometimes brilliant scarlet, with maroon shadings. It blooms soon after planting out and continues all summer. One of the most beautiful hybrid perpetual roses.

Margaret Dickson. Of magnificent form; white, with pale flesh center; petals very large, well-shaped and of great substance; fragrant. Foliage very large dark green. A very promising variety.

Magna Charta. Prized on account of its strong, upright growth and bright, healthy, foliage, and magnificent bloom. Beautiful bright pink, suffused with carmine. A general favorite.

Mrs. John Laing. A splendid rose, perfectly hardy, with immense flowers; full and double; borne in great profusion. Color clear bright shining pink; exquisitely shaded. Cannot be too highly recommended.

Paul Neyron. Deep rose color; good foliage. The largest rose in cultivation. Free bloomer.

Prince Camille de Rohan. Deep velvety crimson; large, moderately full. A splendid rose.

Ulrich Brunner. Raised from Paul Neyron. Brilliant cherry red—a very effective color; flower of fine form and finish. Plant vigorous, hardy and resists mildew. One of the best varieties.

ROSES—Continued

Moss Roses

The beauty of this type of roses consists largely in the delicate mossy covering surrounding the bud. Some of them blossom in the fall and are called "Perpetual Moss."

Blanche Moreau. Pure white; large, full and of perfect form.

Countess of Murinais. White, slightly tinged with flesh. The best of the moss roses.

Perpetual White. Pure white; blooms in large clusters.

Princess Adelaide. Blush, becoming quite pale; very double and well formed. The most vigorous grower of the class.

Salet. Clear rose; very double; a vigorous grower and abundant bloomer. Perpetual.

Climbing Roses

The Climbing Roses are becoming more popular every year and deservedly so on account of the uses to which they are suited. They are well adapted for training against pillars, over porches or any other supports, and produce a brilliant effect by the wonderful profusion of their flowers, which appear in early summer. They are of rapid growth, perfectly hardy and have luxuriant foliage.

American Pillar. A single-flowering variety of great beauty. The flowers are of enormous size, three to four inches across, of a lovely shade of apple-blossom pink, with a clear white eye and cluster of yellow stamens. These flowers are borne in immense bunches. They last in perfection a long time, and are followed by brilliant red hips or berries, which are carried late into the winter; and as the plant frequently retains its lovely green foliage until the end of December, it forms a beautiful decorative subject throughout the autumn months.

Baltimore Belle. Pale blush, almost white. Very beautiful and fragrant.

Climbing American Beauty. A seedling from American Beauty with Wichuraiana and Tea blood in its veins. The introducers say of it: "Same color, size and fragrance as American Beauty, with the addition of the climbing habit. Good foliage, and better blooming qualities. One plant of this new rose will produce twenty times as many flowers in June as the old American Beauty, besides blooming occasionally during the summer. Blooms three to four inches across; has proved perfectly hardy and stands heat and drouth as well as any rose."

Crimson Rambler. This charming climbing rose is unquestionably an acquisition. It is of vigorous habit, strong and rapid grower, with handsome, shining foliage, and produces in great abundance clusters of the brightest crimson semi-double flowers. Its showy clusters, abundance of bloom and length of time the flowers hang on the plant without losing their brilliancy are qualities which make it a favorite. As hardy as the Prairie Queen. Very desirable for verandas, walls, pillars and fences.

Dorothy Perkins. This rose is of the same strong habit of growth as the Crimson Rambler, the flowers being borne in clusters of 30 to 60. The flowers are large for a rose of this class, very double, sweetly scented, and of a beautiful shell-pink color. Absolutely hardy.

Excelsa. A radiant, blood-red cluster rose, as free and double as Dorothy Perkins, of which it is the colored prototype. The clusters are very large and fairly cover the vines.

Evergreen Gem. Yellow in bud, opening to almost white and perfectly double; early flowering.

Flower of Fairfield. A counterpart of Crimson Rambler in every respect, except that it shows everblooming tendencies, many new growths being terminated with a large cluster of flowers.

Greville or Seven Sisters. Purplish crimson and pink.

Hiawatha. There is no other rose so brilliant as Hiawatha. Its flowers are about

American Beauty (See page 41).

CLIMBING ROSES—Continued

one and one-half inches across, and produced in long, pendulous sprays, with frequently from forty to fifty flowers on a spray. In color it is brilliant, ruby-carmine, with a clear white eye and a mass of golden stamens. The plant is of strong, vigorous growth, with bright green, glossy foliage, which is retained until late in fall.

Lady Gay. Flowers of a deep cherry-pink, shading on the edge of the petals to a very delicate soft tone of pink. Will cover a large porch or trellis in an incredibly short time. Extra fine.

Queen of the Prairie. Bright rose; large and double. Very vigorous.

Tausendschon (Thousand Beauties). A rapid growing, almost thornless climber, showing the blood of Rambler, Polyantha and Tea parentage. Its innumerable flower clusters make a pretty show through June and July; at first, the soft pink of Clotilde Soupert, and later deepening to a bright carmine rose.

White Dorothy Perkins. A white flowered form of Dorothy Perkins, very free of bloom and especially valuable because of the rarity of good white climbing roses.

White Rambler (Thalia). Identical with Crimson Rambler, in habit of growth, foliage and manner of blooming, differing only in color, which is pure, clear white.

Yellow Rambler (Aglaia). A hardy yellow climbing rose, blooming in the same manner as the Crimson Rambler; the flowers are of medium size and very sweet-scented. The color is a clear decided yellow. Has successfully withstood a temperature of from zero to two degrees below. A rampant grower.

Hybrid Tea Roses

Chateau des Clos Vougeat. Words are inadequate to describe, and pigments are not made which could reproduce the wonderful coloring and texture of this truly remarkable rose. The most wonderful color and texture ever seen in a rose; looks as if cut out of heavy velvet with a color shading from deepest velvety maroon-red to blackish-crimson. Blooms continuously in crops closely following one another. It is of fine shape, good size and the richest colored of all roses, being fifty per cent darker than Prince Camille de Rohan and quite fragrant.

Champion of the World. Clear bright pink, always in bloom. Much larger flower than Hermosa.

Gruss an Teplitz. Bright crimson, fiery-red center; cup-shaped; semi-double; flowers in clusters; so free in bloom as to present a blaze of scarlet.

Kaiserin Augusta Victoria. Pure white, with shadings of primrose-yellow, deeper in the center; a distinct and very beautiful variety.

Killarney. The finest pink forcing rose ever introduced. In coloring it is especially beautiful, being an exquisite shade of deep seashell-pink. The buds and flowers are of enormous size, the petals being frequently two and one-half inches deep.

Maman Cochet. This is the famous Pink Cochet. Light pink shaded with salmon-yellow, outer petals splashed with bright rose; extremely large and full; fine for cut flowers.

Mrs. R. G. Sharman Crawford. Clear rosy-pink; the outer petals shaded with pale flesh; one of the very finest roses grown.

Richmond. Pure rich scarlet, a seedling from Lady Battersea; very free and continuous flowering, splendid forcer.

Miscellaneous Hardy Roses

Harrison's Yellow. Bright yellow; double. Very showy and fine.

Madame Plantier. One of the finest pure white roses, blooming in clusters.

Persian Yellow. Deep golden yellow flowers of medium size. Double, and very fine.

Rugosa alba. A splendid single white variety. Highly scented.

Rugosa rubra. Bright rose-crimson. The flowers are succeeded by red berries. A very handsome shrub.

Multiflora. Covered in June with very fragrant clusters of small semi-double flowers. Valuable in shrubbery borders and to produce a wild effect.

Setigera (Prairie Rose). Single deep rose-colored flowers. A splendid sort for natural planting. It blooms profusely in June.

Sweet Brier. The rosy pink flowers are followed in autumn by bright-colored seed-pods; foliage very fragrant.

Wichuraiana (Memorial Rose). Beautiful small evergreen foliage. A grand trailer over all sorts of places. Fragrant, single, waxy white flowers are borne profusely in June.

Baby Rambler. One of the most practical, all-around roses ever put on the market. Rich crimson flowers in clusters as large as the popular Crimson Rambler, from which it is derived. Strictly a bush rose and can be grown in the house the same as any of the old-time pot-plant varieties.

Hardy Herbaceous Perennials

A planting of Hardy Herbaceous Perennials affords a display of bloom from earliest spring until after frost comes in the fall, and gives the owner flowers that may be cut at any time for house and table decoration. They will mostly live all winter in the open ground and bloom freely every year. The following are the best varieties:

AQUILEGIA. The Columbines are old favorites that succeed in any garden; they are beautiful in flower and foliage.

Shasta Daisy.

CAMPANULA, Medium (Canterbury Bells, Cup and Saucer). Without doubt this is the finest type of the old-fashioned, much prized garden plant.

Medium roseum. Delicate rosy pink.

CHRYSANTHEMUMS. These are the prettiest and most popular of the early-flowering winter plants. They bloom freely in November and December and nothing makes a more cheerful display. The prevailing colors are white, yellow and red. Should be planted in pots and placed in the house where they will have the sun.

Maximum, Triumph. A strong-growing perennial about 2 feet in height, which continues in bloom from July until October; flowers daisy-like, 3 to 4 inches in diameter, with a golden center; of great substance, lasting a week or more when cut.

Shasta Daisy. Large, snowy white flowers, in bloom all summer and fall.

CASSIA Senna (Marylandica). The bright yellow, pea-shaped flowers are borne in clusters in July and August. A splendid herbaceous plant, growing from 3 to 4 feet high.

COREOPSIS lanceolata. Large golden yellow flowers; profuse bloomer throughout the summer.

DIANTHUS barbatus (Plumarius semperflorens). These are the old favorite hardy garden pinks, bearing sweet, clove-scented flowers in May and June.

DICENTRA (Dielytra) **spectabilis** (Bleeding Heart). A beautiful hardy border plant, with brilliant rosy heart-shaped flowers hanging in great profusion from a gracefully curved stem. May and June.

ERIANTHUS Ravennae. Resembles Pampas Grass, but blooms more abundantly. Valuable for the decoration of lawns.

EULALIA Japonica. A vigorous grower, with large plumes.

Gracillima univittata. A beautiful ornamental grass, with narrow graceful foliage.

Zebrina. One of the most beautiful of the ornamental grasses; yellow stripes run across the leaves.

FUNKIA (Plantain Lily). The different species are free-flowering, with spikes of bell-shaped flowers, but the chief value is in the foliage.

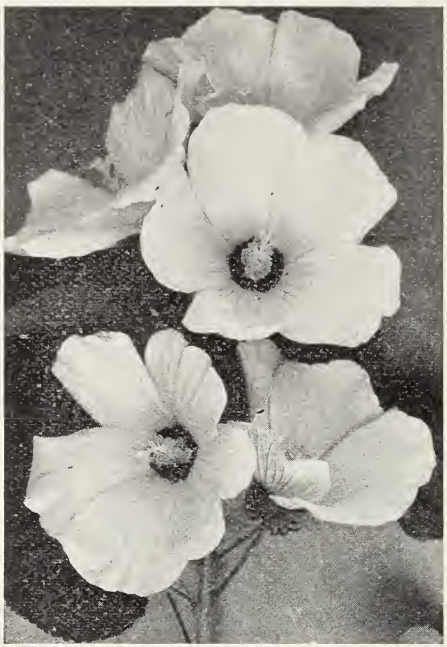
Coerulea. Blue flowers; broad green leaves.

Subcordata grandiflora. Pure white, lily-shaped, large, fragrant flowers in clusters. This day lily is very attractive in bed or border.

GAILLARDIA grandiflora (Blanket Flower). The center of the flower is a dark reddish brown, while the orange petals are differently marked with bands of scarlet and crimson.

GYPSOPHILA (Baby's Breath). These beautiful flowers of easiest culture delight in open, rather dry places; they are especially desirable for rock-work; also good for covering unkempt places with a mass of delicate bloom.

HELIANTHUS (Hardy Sunflower). Where large borders are planted, the perennial sunflowers are among the most effective hardy plants. They are admirably free-flowering, succeed in any soil and are fine for cutting.



Hibiscus.

HEMEROCALLIS flava (Yellow Day Lily). Large yellow flowers in clusters; very fragrant. May and June.

HIBISCUS "Meehan's Mallow Marvels." A magnificent new strain of hardy Mallows, which for size and profusion of bloom and richness of coloring are among the most striking and beautiful perennials that grow. Flowers 8 to 10 inches in diameter ranging in color through various shades of red, pink and white.

HOLLYHOCKS. No garden is complete without this grand, perfect and delicate flower. The flowers are as pure and perfect as those of the Camellia. Seeds sown in the spring will produce plants that bloom the second summer. Plants set out in the spring will flower about midsummer, and for several years if not allowed to bloom too freely the first year.

IRIS, German (Iris Germanica). Popular herbaceous plants that come up year after year, and each season more floriferous than the previous. Desirable in shrubbery and borders, and are beautiful in groups by themselves. The flowers embrace a variety of colors and innumerable tints of blue, yellow and white.

Japan (Iris Kaempferi). Flowers differ from the German in being broad and flat. They exhibit a great variety of colors and shades, and appear later than the others.

PEONIES. These old-time favorites are being planted more than ever before. They all have showy, beautiful flowers, are perfectly hardy and flower early in the season before roses. They deserve a place in every garden. Are easily cultivated and require but little protection.

Andre Lauries. Late, fragrant; red.

Couronne d'Or. Large, imbricated bloom, white reflexed yellow, central petals bordered carmine, golden stamens.

Delicatissima. Delicate fine rose; very large, full and sweet.

Duc of Wellington. Very large, well formed sulphur white bloom, ideal habit, strong grower.

Duchesse de Nemours. Very fine cup-shaped bloom, sulphur white with greenish reflex, fading to pure white.

Eugene Verdier. Some peony specialists consider this the finest variety grown. Large globular and very double flowers, blush, delicately shading to pink. Late.

Festiva maxima. For over fifty years the standard of perfection in peonies. Fine paper-white with a few carmine flakes.

Francis Ortegal. Purple-crimson; very dark; large.

Gigantea. Immense pink.

Grandiflora alba. Early white.

Grandiflora rosea. Beautiful dark pink.

Louis van Houtte. Beautiful shaped bloom, medium large flower, color fine violaceous red.

Mme. Calot. Pinkish white tinted with flesh color. Extra fine variety.

Mme. de Verneville. Very pretty flower, anemone shaped broad petals, those of the center very compact, color sulphur fleshy white, sometimes a carmine spot appearing.

Monsieur Krelage. Broad petals, bright currant red with amaranth center.

Officinalis rubra fl. pl. The old early crimson sort.

Queen Victoria (Whittleyi). Medium early, large, full compact bloom, center petals some years tipped with carmine spots, opens flesh white, cream center, changing to pure white. This is the one to plant for cut flowers.

PHLOX. Familiar plants in old door-yards and valuable in all hardy borders. They are immense masses of bloom from the purest white to crimson. They grow 2 feet or more high and are perfectly hardy.

Alceste. Tall. Deep violet, shading to almost blue.

Bridesmaid. Medium. Pure white, clear carmine eye; blooms in large, round heads. Very attractive.

Coquelicot. Medium. The finest and brightest red of all the phloxes. The color is a bright orange-scarlet.

Jeanne d'Arc. Tall. Large pyramidal heads of immaculate white; late.

La Vogue. Tall. Pure mauve, with an alined red eye. One of the best varieties in our collection.

Madame P. Langier. Medium. Clear crimson, deeper eye. Considered one of the best.

Maculata. Tall. Many branched, with huge pyramidal panicles of bright reddish, almost royal lavender. The freest and showiest of all phloxes; a grand acquisition.

R. P. Struthers. Tall. In our estimation, this is the very best phlox grown today—it has no faults. It is a clear cherry-red, suffused with salmon shades, and deep red eye; fine large truss. The color is so clear and clean that each individual floret stands out as distinct as a cameo.

PHYSOSTEGIA (False Dragon-Head). Handsome perennials, forming dense bushes 3 to 4 feet high, bearing long spikes of delicate tubular flowers.

Virginica. Soft pink.

PLATYCODON grandiflora. Showy, bell-shaped blue flowers in June and July.

Album semi-plenum.

RUDBECKIA (Golden Glow). A hardy perennial, growing 6 to 7 feet high and producing hundreds of bright golden flowers 2 to 3 inches in diameter, on long, graceful stems, forming immense heads of bloom. When once well established, will furnish an endless amount of flowers.

YUCCA filamentosa (Adam's Needle; Spanish Bayonet). An interesting tropical-looking plant, with stems 3 feet above the ground, covered with large, bell-shaped flowers on laterals, forming a perfect pyramid. Thread-like leaves.

Summer and Autumn Bulbs

Require Taking Up In Fall to Keep From Freezing

CANNAS. Stately and highly ornamental plants, for both flowers and foliage. They attain a height of from 2 to 5 feet, and may be grown singly or in masses. Leaves green or brownish red; flowers scarlet, crimson, yellow, cream, etc., variously marked.

DAHLIAS, Double. Well-known autumn-flowering plants, growing from 2 to 5 feet high, and producing a profusion of flowers of the most perfect and beautiful forms, varying in color from pure white to the darkest maroon. Becoming very popular.

GLADIOLI. Of all our summer-flowering bulbs, the Gladioli stand eminently at the head as the most varied and beautiful class. The flowers are produced in spikes 2 feet high and upward, the brilliant scarlet and crimson of some form a striking contrast with the delicate shades and pencilings of the light-colored varieties. By planting at intervals from May 1 to June 15 a succession of flowers can be had from July to October.

TIGRIDIAS (Shell Flower). One of our favorite summer-flowering bulbs and of the easiest culture, displaying their gorgeous tulip-like flowers of orange and scarlet from July to October.

TRITOMA Pfitzeri (Torch Lily). For color effect in orange-scarlet, nothing equals this free-flowering, easily-grown plant. The spikes are 3 to 4 feet high, and heads of bloom 10 to 12 inches long. July to September.

TUBEROSE, Double and Single. The flowers are very fragrant, on stems 3 to 4 feet high; blooms in autumn.

Pearl. More valuable than the common variety on account of its flowers being nearly double the size and imbricated like a rose, and in its dwarf habit, growing only 1½ to 2 feet.

Flowering Bulbs for Fall

CROCUS. A universal favorite and one of the first flowers to bloom in the spring. In various colors. Should be planted about 2 inches deep.

HYACINTHS. The Hyacinth stands foremost in the list of all the bulbs used for winter-flowering. They are too well known to need description. Can be grown in glasses filled with water or in pots or boxes of soil.

JONQUILS. Pretty varieties of the Narcissi, having a very agreeable fragrance. Adapted to either pot culture or the open ground. The bulbs, being small, six or eight may be planted in a 6-inch pot.

LILY-OF-THE-VALLEY (Convallaria majalis). This is as hardy as any plant can possibly be, and when planted in the open ground will increase very rapidly.

NARCISSI, Garden Varieties. Admirably adapted to garden decoration in early spring. They are easily cultivated, are hardy, very showy and fragrant.

SNOWDROPS. These are the earliest of the spring-flowering bulbs, often blooming before the last of the snow has disappeared. Very much admired because of its elegant snow-white, drooping blossoms.

TULIPS. Owing to late spring frosts, bedding plants cannot be planted before the early spring-flowering plants are done blooming. Without these bulbs, for one or two months our gardens would present a bare appearance. There is nothing that will give a more gorgeous showing for the money invested, and nothing more easily grown than the Tulips. They thrive well in almost any soil. Plant during October and November.

Formulas

Bordeaux Mixture

Copper Sulphate (blue stone)	4 lbs.
Quick lime	4 lbs.
Water	50 gallons

Dissolve the copper sulphate in water at the rate of one pound to one gallon, slake the quick lime and add sufficient water to it, so that when it is well stirred a gallon measure will hold one pound of the lime. These are "stock solutions" and are to be kept in separate vessels, preferably wooden barrels, as the copper sulphate will quickly corrode such metals as iron or galvanized iron.

When a batch of spray mixture is to be prepared, pour four gallons of the copper sulphate solution into a third vessel large enough to hold half the quantity needed to fill the spray tank; do likewise with the lime, adding twenty-one gallons of water to each. These dilute solutions are to be run at the same time into the spraying tank, letting the streams come together at the top of the tank. By diluting the stock solutions of lime and copper sulphate and running these dilute solutions together, a grade of bordeaux mixture is prepared which stays in suspension better and adheres to the foliage for a longer time than when the concentrated solutions are mixed.

Lime-Sulphur

Quick lime	50 lbs.
Sulphur	100 lbs.
Water	70 to 75 gallons

Sift the sulphur and add to enough hot water to make a thick paste; stir thoroughly. Slake the lime and as it is slaking add the sulphur; keep mixture stirred, adding sufficient water to keep in the form of a thin paste. As soon as slaking is finished, add enough water to bring to thirty gallons. Boil the whole quantity until mixture presents a dark red color, approximately three-quarters of an hour to an hour. This solution must be diluted for use. For dormant spray, use about one gallon to ten gallons of water. For summer spraying when trees are in leaf, use about one gallon to fifty gallons of water.

Self-Boiled Lime-Sulphur

Quick lime	8 lbs.
Sulphur	8 lbs.
Water to make	50 gallons

This material can be prepared in large lots, that is three or four times the quantity required by this formula, but in that proportion. Sift the sulphur and make into a paste with warm water. Start the lime slaking and as soon as this is well under way add moistened sulphur. Keep the mixture thoroughly stirred, adding sufficient water from time to time to keep it as a thin paste, but not wet enough to drown the lime. When the mass has stopped all noticeable signs of boiling, add enough water to make up to fifty gallons, and it is ready for use, but must be run through a fine strainer into the spray tank.

Arsenate of Lead

Acetate of lead (sugar of lead)	11 ozs.
Arsenate of soda	4 ozs.

This material has come to be the standard insecticide for such insects as the codling moth and canker worm. Dissolve the acetate of lead in a gallon of water and the arsenate of soda in half a gallon of water in a separate vessel. When these are dissolved, pour them into fifty gallons of water and it is ready to apply. The liquid then has a milky appearance, due to the formation of arsenate of lead which settles in the course of time as a heavy white paste.

Kerosene Emulsion

One-half pound common bar soap, two gallons of water, two gallons of common kerosene. Dissolve the soap in hot water; while still hot, add the kerosene and stir or churn vigorously until a soft soap or cream-like substance is formed. When cold, dilute with water to make from ten to twenty-five gallons of liquid. This is used for the destruction of sucking insects, like aphides (plant-lice), scale insects, etc. Always use soft water.

Formula for Whitewash

Slake ½ bushel of fresh lime with hot water, keeping it covered during the process. Add ½ peck of salt previously dissolved in warm water, 2 pounds of ground rice boiled to a thin paste. Stir in boiling hot ½ pound Spanish Whiting, ½ pint glue well dissolved in warm water. Dilute the above with 8 gallons of hot water, stirring it well to become thoroughly mixed. Strain through a fine sieve or strainer, and allow it to stand a few days before using.

SPRAYING CALENDAR

Experience and careful study into the habits of insects and the causes of rot, fungus and blight, that are so destructive to fruit trees, plants and fruits, has demonstrated the fact that spraying at the proper time and properly done, for the protection against these enemies of the horticulturist, is the best, if not the only remedy, and that it has succeeded and will succeed is evidenced by rapidly increasing interest manifested in the manufacture, sale and use of spraying machines, and the good results obtained by those who practice this mode of protection.

It is impossible in a catalogue like this to give descriptions of insects, diseases, etc., but only a brief outline of how to prepare formulas and when and how to use them in order to effect a remedy, which will be found as follows:

We present this table to assist fruit growers in spraying at the right time and with the correct solution.

NAME OF PLANT	VARIOUS APPLICATIONS OF SPRAYING SOLUTIONS				INSECTS AND FUNGI
	First Spraying	Second Spraying	Third Spraying	Fourth Spraying	
Apple	When buds are swelling, apply Bordeaux.	Before blossoms open, Bordeaux. Add Paris green to the solution for canker worm or bud moth.	When blossoms have fallen, Bordeaux and Paris green.	Twelve days later, Bordeaux and Paris green.	Codling moth, canker worm, bud moth, apple scab.
Pear	Before buds swell, Bordeaux.	Before blossoms open, Bordeaux. Kerosene if psylla is present.	Twelve days later, Bordeaux and Paris green.	Fourteen days later, Bordeaux and Paris green.	Codling moth, leaf blight, scab and psylla.
Plum	Just before buds open, Bordeaux and Paris Green.	After blossoms fall, Bordeaux and Paris green.	Twelve days later, Bordeaux and Paris green.	Kerosene when aphis or scale is present.	Curculio, rot, aphis and scale.
Cherry	Just before buds open, Bordeaux. Kerosene when aphis is present.	When fruit has set, Bordeaux.	Twelve days later, Bordeaux, if signs of rot are present.	Kerosene if aphis is present.	Rot and aphis.
Peach	As buds are swelling, Bordeaux.	Before blossoms open, Bordeaux and Paris green.	After blossoms have fallen, Bordeaux and Paris green.	Two weeks later, Bordeaux and Paris green.	Rot, mildew and curculio.
Grape	When buds are beginning to swell, Bordeaux.	As buds are opening, Bordeaux.	Two weeks later, Bordeaux.	Two weeks later, Bordeaux.	Rot and other fungous diseases.
Currant and Gooseberry	When leaves appear, Bordeaux.	Ten days later, Bordeaux. Hellebore for worms; quassia and tobacco for aphis.	Repeat second when necessary.	Ammoniacal copper carbonate after fruit is half-grown.	Mildew, worms, aphis.
Raspberry, Blackberry and Dewberry	When buds begin to swell, Bordeaux.	When leaves are opening, Bordeaux. Cut out all rusted canes.	Two weeks later (when not in flower), repeat second.	Before fruit is full size, ammoniacal copper carbonate solution.	Fungous diseases.

We can furnish large specimens of Shade and Ornamental Trees and Evergreens. By the use of derricks we handle them with a large ball of earth, and in this way are enabled to give to a new place the appearance of old established grounds.

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